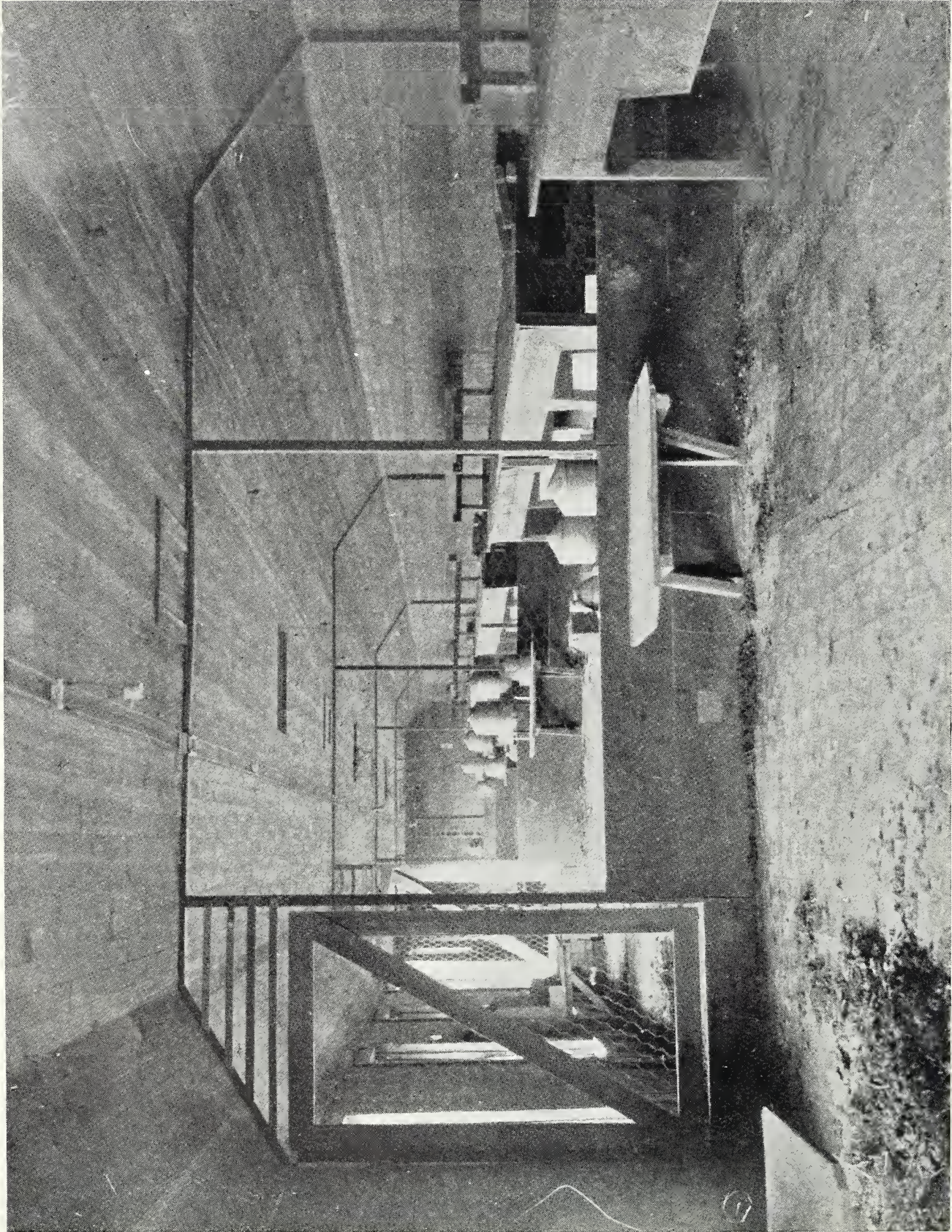


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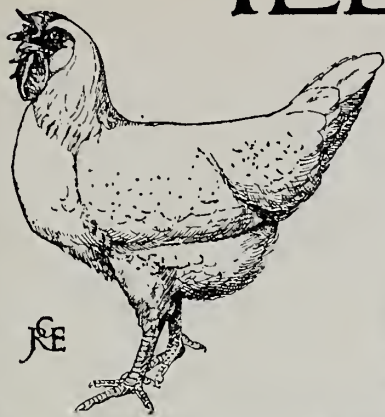


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THE ILLUSTRATED POULTRY RECORD



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EDITORIAL NOTICES.

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The Editor will be glad to consider any MSS., photographs, or sketches submitted to him, but they should be accompanied by stamped addressed envelopes for return if unsuitable. In case of loss or injury he cannot hold himself responsible for MSS., photographs, or sketches, and publication in the ILLUSTRATED POULTRY RECORD can alone be taken as evidence of acceptance. The name and address of the owner should be placed on the back of all pictures and MSS. All rights of reproduction and translation are reserved.

The Editor will be glad to hear from readers on any Poultry Topics, and all Queries addressed to the paper will be answered by experts in the several departments. The desire is to help those who are in difficulty regarding the management of their poultry, and accordingly no charge for answering such queries is made.

The Annual Subscription to the ILLUSTRATED POULTRY RECORD at home and abroad is 8s., including postage, except to Canada, in which case it is 7s. Cheques and P.O.O.'s should be made payable to Brown, Dobson, and Co., Limited.

The ILLUSTRATED POULTRY RECORD is published on the first of every month. Should readers experience any difficulty in securing their copies promptly they are requested to communicate immediately with the Editor. The latest date for receiving advertisements is the 20th of the month preceding date of issue.

The utmost care is exercised to exclude all advertisements of a doubtful character. If any reader has substantial grounds for complaint against an advertiser he is requested to communicate at once with the Editor.

A Great Opportunity.

The article which we publish in the present issue on "The Development of the Poultry Industry" should be the means of rousing poultry-keepers of all classes, whether farmers or specialist breeders, large and small, to the necessity for strenuous and united action to secure fair and adequate support, recognition, and encouragement of their pursuit, educationally and otherwise. During the last year we have shown (1) that in Ireland the money expended in this direction has yielded greater results than in any other, (2) that the Poultry Industry has been practically starved by nearly all our public bodies (and yet it is practically the only branch of live stock which has increased of late years), (3) that the need for increased educational facilities and definite experimental work is pressingly important, and (4) that foreign supplies of eggs are decreasing steadily but surely, whilst the home demand is growing rapidly. With the passing into law of the Development Bill, a new and supremely important advance, money is now available. Of that poultry-keepers should demand with no uncertain voice an adequate share. That will not, however, be secured without effort. This is not a political question, but one of economics. We suggest that in the forthcoming General Election every Parliamentary candidate shall be asked to promise his support, and that in every village, hamlet, and town pressure shall be brought to bear upon County Education Committees to compel them to remedy what has been a scandal. Clubs and societies would do well to sign a "petition of rights." We ask no favours, only bare justice. The ILLUSTRATED POULTRY RECORD is not concerned with party politics, but its readers are, in many cases, interested because they are called upon to vote, and

because the side they take in the great contest may be decided by their views upon the issues involved. We must recognise that much may be done by those who will in the near future write the coveted M.P. after their names towards securing an adequate share of public funds now available for the first time for the promotion of the Poultry Industry and for the provision of educational facilities. Hence it is suggested that the facts which we have brought forward in the present and previous issues shall be brought emphatically before candidates of every shade of opinion. They, in many cases, require education, and there is no more favourable time for emphasising such instruction than when they are seeking the suffrages of electors. In view of the decreasing foreign supplies and the increasing home demand, it is a question of food supply and of national welfare.

Who Are the Best Judges?

Looking through the pages of a horticultural and poultry journal published nearly sixty years ago, we note with interest the stand that was made by many of the most influential fanciers of that day against professional breeders and dealers officiating as judges. No doubt the principles that inspired the objection were sound and reasonable. It has often been held that a breeder or a dealer is naturally prejudiced in favour of birds he has bred or sold, and it is not unreasonable also that the power conferred upon him in his position as a judge has a stimulating effect upon his business as a dealer. However that may be, we are either less suspicious or less cautious than our forefathers, for nowadays no bar is placed against professional breeder-judges or dealer-judges. Happily there is every reason to believe that the present-day judges of this class enjoy the confidence of exhibitors, though the question still remains whether it is good policy to place temptation in their way. But another point must be remembered. The conditions in the Fancy are very different to what they were sixty years ago. There are so many shows held nowadays that, without falling back upon the ranks of the professional breeders and dealers, it would be difficult to find competent judges for all. Disinterestedness is not the only quality in a poultry judge. He must understand the birds he is judging, and, above all, he must have a quick eye for distinguishing good and bad points, for many a successful breeder has failed as a judge through lack of the discriminating faculty.

The Broody Hen Famine.

The modern fashion of early hatching, even if it has nothing else to recommend it, certainly creates a keen demand for old hens of doubtful

age and character so long as they possess the saving merit of wanting to sit in the depth of winter. Five and six shillings apiece have been readily paid for the veriest of mongrels, which, by a happy chance, have become broody during the time when fanciers were setting their earliest eggs, and we hear of persons who by scouring the country and buying hens from farmers have done quite a good business by retailing the birds to fanciers, securing in some cases a profit of 75 to 100 per cent. Since there is evidently so much merit in the early broody hen there would appear to be scope for the development of brooding strains, and there is no reason why, by adopting, for instance, a Silkie-Wyandotte cross, business poultry-keepers should not rear annually a number of pullets which, after laying a few eggs to help pay for their cost, would become broody, and find a ready sale at high prices.

Fowls and Sleeping Sickness.

The value of poultry in connection with fruit and plant culture is well known. Not only do they manure the ground and provide that nutrition which is required, but they devour the parasites which do so much harm to the trees, and thus prevent that loss which otherwise would arise. Twenty years ago, when the vineyards of France were decimated by the phylloxera, it was found that fowls rendered great service in combatting the attacks of those predatory hordes, and in some cases saved the vines when everything else failed. So far as is known, the insect referred to was not injurious to human, but only to plant life. In Africa, where sleeping sickness is one of the great problems, causing thousands of deaths every year, it has been shown that it is conveyed by a form of tsetse fly, which in Eastern Africa is found in marshy places, and especially in the banana plantations on the shore of the Albert Edward Lake. As the banana is the food of the natives, the trees cannot be destroyed, and Professor E. A. Minchin, of the Lister Institute of Preventive Medicine, has suggested that if fowls were introduced they would speedily scratch up and devour the pupæ from the banana rootlets.

Table-Poultry at the Smithfield.

The exhibition of dead poultry at the Smithfield Club Cattle Show, which was held on Wednesday, December 8, still maintains its popularity, and, judging by the crowd of visitors that formed a constant procession past the turnstiles, it appears that this section of the Cattle Show appeals to a larger number of the farming fraternity than those directly engaged in the production of fattened poultry for table purposes. The standard set up by the prize-winners at this

fixture is a very high one as regards quality, but as the intention of the promoters of this exhibition was, in the first place, to encourage this branch of the industry, we are of opinion that more might be done to further this laudable object. No doubt there is a certain demand for very large birds of fine quality such as those shown, but we believe the larger demand is for smaller fowls. In a word, the exhibits were abnormal in size, and, judging from a purely commercial standpoint, not the class of fowl required by the trade. As a sample of the fatter's art the birds were wonderful, but the trade requirement on the whole is not for such specimens as those shown by Mrs. Paynter in the Farmyard Fowl Class, with which she secured the first prize in the class, the cup for the best couple of cockerels or pullets, and the gold medal for the best pair of birds in the show. These were certainly wonderful productions, but, again speaking commercially, not largely demanded by the trade. We would advocate introducing special classes—say, for six birds of various breeds and crosses, the average weight not to exceed three pounds. The effect of this would be to encourage many of those who fatten for the different markets to enter into competition, and thus the industry would be more generally benefited.

The Climax of Production.

Apart from the more general appeal of the Christmas markets, the chief December interest of producers centres in the two days' Smithfield Show of dead poultry, and that of the past month was no exception to the rule. A much greater interest really attaches to this than to any other exhibition of dead poultry, inasmuch as it is the climax of the year's production, and in no inconsiderable measure is representative of the best work of English producers in the several sections—including that of the turkey-breeder, whose produce is not earlier available in its nearest approach to perfection. It is, however, a matter for regret that the turkey entries, in common with some others, seldom make numerically strong classes, and that in these and a few other classes it consequently happens that the same names become annually associated with the prize-taking. Of course no one begrudges the constant winners their successive successes, but it would add to the excitement to see their positions more keenly contested. In many classes it is true that the evenness of the exhibits at this event must make the judge's task an onerous one, nevertheless there are others in which the produce of certain yards stands out pre-eminent. Instead of deterring competition, this should encourage a wider emulation.

Practical Mendelism.

"Heredity in Farm Animals" was the subject of a useful paper read by Professor T. B. Wood, of Cambridge, on December 6 at the Farmers' Club. Students of heredity will remember that the results of some of Professor Wood's experiments in the crossing of Suffolk (hornless) and Dorset (horned) sheep were recorded in Professor Bateson's book "Mendel's Principles of Heredity," published last year. Further results obtained by Mr. Wood led him to claim that both in the case of sheep and that of fowls they conform to Mendelian principles in regard to colour and other characters. But although we know Mr. Wood to be one of the zealous "Cambridge School," and would expect to find in him a natural bias in favour of the mutation theory, he, with commendable moderation, claims nothing more than can be proved by the evidence he produces. He is also careful to point out that the breeder of live stock who would profit by Mendelism will be better advised to obtain his facts from the experiment station or farm laboratory, where they have been worked out with every precautionary care, rather than draw inferences open to error from experiments crudely conducted on the general farm. Which seems to mean that Mendelism as yet is of little practical use to the farmer unaided by scientific instruction—surely another argument, and a strong one, in favour of the demand for more liberality on the part of Governments in the matter of technical agricultural instruction.

To-Day's Eggs.

We notice in a cutting from a French paper that a provision merchant in France has been fined for selling eggs under an incorrect designation. It appears that he exhibited three grades of eggs for sale—namely, fresh, new-laid, and "to-day's" eggs. It was proved in court that the to-day's eggs were in reality Russian, and for this offence he was fined £20. We look forward to the day when similar prosecutions are made in this country, for it is certain that a very large number of eggs are retailed as new-laid when they are days old, and in this way the public are defrauded. We would like to see this carried still further, and those who expose bad eggs for sale prosecuted for selling an article unfit for human consumption. If the law governing this is necessary in those cases in which the nature and condition of the article being purchased can be noticed at a glance, it is still more necessary in the case where the contents of the eggs cannot be examined until they are taken home. We would remind our readers that the Board of Agriculture are always willing to follow up any case in which eggs are sold under a wrong designation.

THE DEVELOPMENT OF THE POULTRY INDUSTRY.

By EDWARD BROWN, F.L.S.

THE Development Bill, introduced in August last, has been passed by both Houses of Parliament and received the King's signature. It is, therefore, now the law of the land. To all who are interested in rural pursuits, and to practical poultry-keepers as much as any, this event is of supreme importance. Not only does the measure named indicate a momentous change in the policy of our central authorities, acknowledging a new responsibility on the part of the Government among other concerns for promotion of the national food supply, but it provides money for the accomplishment of that purpose. Wisely administered, it should completely revolutionise our rural districts. That is the declared object of the promoters. It is satisfactory to state that whilst there may have been differences of opinion as to details, the principles underlying this measure have been approved by all parties and people of every shade of opinion. Hence it is a question which unites and does not divide.

FAVOURABLE CONDITIONS.—That the present is a favourable time for making a new departure is unquestionable. For long years lamentation has been made as to the flow of population from country to town, depopulating our rural districts and making us more and more dependent upon foreign food supplies. But practically until two years ago, when the Small Holdings and Allotments Act of 1907 was passed, nothing had been done to stem that tide. Nevertheless, there has been a distinct "back-to-the-land" movement, which is growing in volume and will increase still more. That being so, the importance of rendering every assistance is evident to all. In these days of keen competition, when Colonial and foreign Governments afford help in every way to producers, in some cases actually undertaking the task of finding markets, we can no longer afford to leave to chance or isolated or private action the duty of development. No branch of agriculture has suffered more from neglect than poultry-keeping, by reason of the fact that the majority of egg- and poultry-producers keep but few birds and the value of their individual output is small. Moreover, they have had to face a large amount of antagonism and to fight the ignorance which suggested that their pursuit was of no moment.

There is, however, another reason why the passing of this Act of Parliament is timely—namely, the reduced volume of foreign supplies of eggs from those countries which send us the better qualities. Statistics showing how great is this decline have already been given in the

POULTRY RECORD, and need not be repeated. From such evidence as is available the decline is likely to continue at an increasing rate, largely owing to German demands, though France is also importing extensively from Belgium. Had it not been for the vast increase in Irish supplies, which we may hope will grow to a much greater extent, the effect would have been very serious. Prices have advanced quite far enough without checking consumption, which would be undesirable. To meet part of the shortage it may be hoped, as a result of the Departmental Committee on Poultry-Breeding in Scotland, that section of the kingdom may soon be able to supply all the needs of its own markets and spare a proportion for the North of England. And, further, recent observations in Wales have shown that the Principality is capable of enormously increasing its output of eggs and poultry, to the value of at least £1,000,000 sterling per annum. So far as England is concerned, the opportunities are enormous, and by reason of local demand the greater part of the country has customers within reach. Few English counties supply their own needs. In this respect Great Britain, excepting the highlands and islands of Scotland, differs from Ireland and Denmark, which must export their produce to find profitable markets. We have these practically at our own doors.

STATE AID REQUIRED.—The fact last mentioned explains why methods which have proved so successful in Ireland and Denmark, and are absolutely necessary in the North and West of Scotland, need not be adopted over the rest of Britain. The conditions of every country vary so much that to copy slavishly would be foolish in the extreme, and would fail to achieve the result desired. This fact was recognised at the second National Poultry Conference, held two and a half years ago, when a paper dealing with "The Application of State Aid to the Poultry Industry" was read. For instance, except, perhaps, in one or two sections of Wales, the establishment of breeding stations supported by public money is not required. That work may fairly be left in the hands of individual poultry-keepers, whose number is sufficiently great to meet all the demand likely to arise. With the advent of skilled breeders on utility lines and scientific selection of stock, everyone who is desirous of improving or increasing his poultry can obtain the necessary birds at reasonable prices. Much has already been done in this way, and more will follow. The trade is a very large one, yet capable of great increase. I do not

mean that college and farm schools where a poultry plant is maintained should not sell eggs for sitting or stock birds, for these should be encouraged to do so, but that we do not need the establishment of breeding-stations with public money.

REMOVAL OF RESTRICTIONS.—First and foremost for the development of the Poultry Industry it is essential that restrictions on poultry-keeping, direct or indirect, shall be swept away. Happily the areas over which such checks on progress are to be met with form but a moiety of the entire country, but they are sufficient to influence the total food-production, from the fact that many of them are among the most favourable, by reason of soil and general environment, for poultry-keeping. Wherever small holdings and allotments increase in numbers restrictions of this kind will disappear, for the occupants will have that security which enables them to defend their own interests. But, also, the time has come when agricultural labourers should have the freedom to keep poultry that is denied to them in many districts. Times have changed. It is a question of food supply, of national welfare, of rural re-population. Not only must opportunity be afforded to those who live on the cultivated lands, but there are vast areas which practically contribute nothing to feeding the people, yet are capable of doing much in that way. And, further, markets must be free and open. No more important question for the people of London presents itself than that of the monopolies held, which prevent markets being opened in accordance with the growth of the metropolis. I have endeavoured to secure the appointment of a Departmental Committee which would deal with every aspect of the Poultry Industry, and not least with those referred to above, but up to the present have not succeeded. Why, I do not know. Dairying, horticulture, and other branches have received attention this way, and what is necessary for one is equally so for the other.

EDUCATION.—The basis of all progression in these days is educational facilities. Without such teaching as we have had since 1892 it would have been impossible for the Poultry Industry to have made the great advance which has marked the last decade in England and Ireland especially. I question whether any other branch has yielded equal returns for the money expended in poultry instruction. Except for a few favourable exceptions, colleges and County Councils have only done what they were forced to do. In no case which I know has anything like an adequate proportion of the money available been expended on this subject, considering the interests involved and the probable returns. The time has arrived

when we may demand that in every county of the kingdom instruction in poultry-keeping shall be provided for everyone who desires to avail himself or herself of it, and that near at hand. This should be by instructors, who may lecture or give practical instruction in the villages as required, systematically mapping out the areas and dealing with them in accordance with their conditions. I do not advocate compulsory poultry education, but the present system frequently discourages rather than encourages instruction. For those who have the time and desire advanced instruction with practical training, schools and colleges should provide the opportunity at times which will fit the convenience of the applicants. In some districts Saturday afternoon classes extending over several weeks, or summer courses, should be arranged, and the more practice that can be given the better. At all colleges, farm schools, and winter courses in agriculture an indispensable qualification for receiving grants should be that the syllabus shall fairly represent every branch, in which case poultry will occupy a higher position than ever before. Further, as far as possible, every college should hold special poultry courses for short or long term students, and should include on its experimental farm a properly equipped poultry plant. At a few institutions diploma courses in poultry, extending over one or two years, should be secured as soon as possible. In connection with these might be offered annually several travelling scholarships open to general competition, and I believe these would repay the cost a thousand-fold. One result which I hope may come from the Development Act is the reduction of fees or the provision of a large number of Poultry Scholarships. I was greatly impressed in America with the fact that no fees are charged to students at Agricultural Colleges who come from the State in which the institution is situated.

RESEARCH WORK.—In no direction has the need for public aid been more manifest than in regard to research and experimental work, respecting which we have been so lamentably deficient. The few experiments recorded in the United Kingdom have been valuable, but compare miserably with what has been attempted elsewhere. The field is a very wide one. Scores of problems present themselves for investigation as a result of our intensification of methods and the importance of the Poultry Industry to the nation at large, which investigation, as the results would be public property, must be supported by public funds. The Development Act affords an opportunity never presented before, and the means are available. What we want, and must have, is a thoroughly equipped Central Institution, in the closest touch on one side with scientists of the highest grade, who are

willing to co-operate in research work; on another, with Agricultural Colleges and County Councils, so that experimental work may be co-ordinated and overlapping avoided; and with practical poultry-keepers to ensure that experiments shall be of real value. Such a Central Institution should be ready and able to inquire into and investigate outbreaks of disease, and there students of the highest grade would be trained both in research and practical work. I have a notebook before me crowded with subjects and problems demanding investigation, many of which are of vast import to poultry-keepers, waiting the opportunity for dealing with them.

ORGANISATION.—Whilst the business side may largely be left in the hands of producers and traders, there are two directions in which help is needed. First, the training of those who engage in the work of preparation for and marketing of produce, whether as private enterprises or on co-operative lines. That is education, and should be the duty of County Councils. The second is by provision of capital at a cheap rate, so that co-operative societies can extend their operations.

WHAT IS TO BE DONE. — That there will

be a great scramble for the money provided by the Development Act is undoubted. Every interest and pursuit will be eager to secure a share. Possibly, those who press hardest may get most. Poultry-keepers have been too modest in the past. We want fair recognition and help—nothing more. But, taking into consideration that poultry-keepers are found among all classes of the community, that the success of small holdings will in many districts depend largely upon the poultry and eggs produced, and that small producers need education and help to a greater extent than the larger farmers, we must press for much more than has hitherto been given. To that end everyone interested should bring the greatest pressure to bear upon Parliamentary candidates and County Councillors. Unless they make their case fully known, they will have again to take the “back seat” which has ever been their lot in respect to educational and other funds. Now is the time to act. Once let the money be appropriated in other ways, and the opportunity will be gone. I believe the central authorities are sympathetic, but cannot say as much for local bodies, who need strong pressure to secure even a meed of justice for the Poultry Industry.

AMONG THE BLACKBURN POULTRY-KEEPERS.

SOMEHOW or other things do not always happen as expected. Who has not heard stories of the “clang of the wooden shoon”? Is it possible that anyone has not heard it stated that visitors to Lancashire towns are awakened in the early morning by the clatter of the clogs of those who are off for their day's work in the mills? No; it did not happen in this way with us. For, perhaps owing to the quiet surroundings of the Old Bull Hotel, that famous old hostelry, we did not waken until after the sun had risen and the cold fog of overnight had been dispersed by its gentle rays. Breakfast was hardly over when Mr. T. Marsden, the hon. treasurer of the Blackburn and District Fanciers' Society, called to make up our programme for the day's visits to some of the members' yards. As we were armed with our camera, it was a case of “hustling,” so as to make as many calls as possible before the setting of the sun, and so it was arranged for us to go into the southern suburbs in the forenoon and the northern parts of the town in the afternoon.

It may be stated here that the Blackburn Society, though called a Fanciers' Society, con-

tains a large number of utility men, and we were fortunate enough to be able to see members belonging to each class. A car ride from our hotel, passing the Infirmary en route, brought us to Ewood, where we were booked for a couple of visits. The first was to Mr. J. Parkington's yard, which is situated on the hill to the west of the main road. Mr. Parkington is a firm believer in the profitableness of utility poultry-keeping, and he assured us that his birds paid, and paid well, even in face of the fact that the ground is somewhat damp. He has first-class birds, and he has no difficulty in securing eggs in winter. It says much for the vitality of his strain that he is enabled to obtain such good results in such a situation. Leaving here, a short walk to the eastward, to the higher ground by the Yorkshire and Lancashire Railway, brought us to Mr. J. T. Minard's poultry runs. Mr. Minard is a fancier, and has been very successful in the past with his Black and Buff Orpingtons and White Leghorns.

Mr. J. Barron's yards at Lower Darwen were next inspected. This is a utility place, and the greater number of the birds are given their liberty,

a large field being employed for this purpose. Mr. Barron is another enthusiast in connection with utility poultry-keeping, and it was most refreshing to hear him express such decided

from two boxes, cost 1s. 3d., and two sitting-hen or hatching-boxes, one tarred and the other plain, cost 4½d. The finished articles will be taken to the next meeting of the Society and

exhibited, so that members may see exactly how to fashion similar appliances for themselves. A large coop or a cockerel house has also been made for demonstration and at a cost of under five shillings.

By the time we had inspected this last place the light was going, and therefore we were not able to use our camera when we visited Mr. Warmsley's farm. Mr. Warmsley maintains about 500 head of utility stock of various breeds. The majority of these



ON MR. MINARD'S FARM.

[Copyright.]

opinions. We tried hard in the short time at our disposal to secure photographs of his birds, but unfortunately they had just been fed, and therefore they were not very tractable. Such was the enthusiasm of Mr. Marsden that we were only allowed a short hour for lunch before we once more got on the road for two more visits. The first was to Mr. Marsden's own farm. As we have stated, this gentleman is the treasurer of the Society, but he is really more than this. It is undoubtedly owing to his efforts that the membership is so large and the keenness so manifest. We believe that if officials of other clubs carried out similar work for their members as Mr. Marsden does for his, the poultry industry as a whole would greatly benefit. His method of sustaining the interest of others in poultry-keeping is simple and inexpensive, and he freely gives the necessary time and labour involved. At the time of our visit he was constructing various appliances out of Tate sugar and other boxes. The illustration gives an idea of what can be done with such an article at the expense of but little work. Reading from right to left, we have after the sugar-box a trap-nest, cost 5d., a coop fitted with two doors and movable floor

birds are imported from Ireland each September, at prices ranging from 21s. to 27s. a dozen, and



A TRANSFORMED SUGAR-BOX. [Copyright.]

although not giving quite such good results as would be obtained from home-produced stock, they still show a considerable profit.

FOWL-LIFE IN THE GREAT TOWNS.

By WILFRID H. G. EWART.

AS the train carries you out of London, or as it bears you into London; as the long rows of small brick houses on either side fly swiftly by; as you catch glimpses of the little back-yards that abut on the railway embankment, and the various occupants, and the various occupations of the occupants of those back-yards—like everybody else you are astonished at what you see therein. All sorts of people are to be seen doing all sorts of things; neat arrangements and ingenious economies of space impress you with a sense of the compressed conditions of back-yard life; odd adornments and embellishments of

enjoys little of the freedom which in the beginning of things the good God gave her to enjoy, and doubtless intended she always should enjoy, it is not to be expected that her contentment should be so great as the contentment of the hen in the farm-yard, who lives, eats, and does what she likes to the end of her natural days. Nevertheless, remember this: our back-yard person is in all probability born of the back-yard, and no other yard has she ever known. She is part of the town—almost like the gaunt back-street cats, or the dogs that scavenge the gutters; and she is a very interesting person if you take



WITHIN HALF A MILE OF A GREAT TOWN.

[Copyright.]

plain ugliness invite your notice (if you have time to give it); not least of all, the strange occupants of nine out of ten of the little places make you think of the tremendous way in which every inch of this ground is utilised and every yard of that metropolis is populated. Whether it has always been so I cannot say. Probably only in the last fifty or sixty years, during which the strenuousness and the rush and tear of work in the great towns have increased, have the poor sought relief in live-stock keeping from their trouble and struggles and daily toil.

Maybe the life of a back-yard hen is a miserable one—we have often been told it is. Truly she

the trouble to notice her and discover for yourself how she lives.

As for the back-yarder, her master, he is, as a rule, a man of surpassing ingenuity. If you have ever attempted to keep fowls in a dirty little earth run a few yards square you will know just how difficult it is—from a hygienic and a practical point of view. All sorts of expedients have to be devised to economise space and money. Fowls are not to the average working-man a source of much, or any, profit—he does not look for it. Of course we know that there are some people who pay their rent almost entirely by the aid of their half-dozen hens; but those people

are rare. The average back-yarder very likely hasn't the faintest idea at the end of the year how he stands as regards the £ s. d. What he and his wife and his children are concerned about is that the small dingy enclosure at the back of their tenement shall be inhabited by something more exciting than washing and more interesting than rubbish. To dwellers in streets, a hen without being the least sentimentally valued is, none the less, I dare say, a reminder of the world beyond smoke, streets, and back-yards; moreover, she is a thing that can be fed, that will lay eggs, that can be petted, that can be talked to and will talk. As such, she makes a deal of difference to the life of the tenement; she—the domestic hen—the bright, good-humoured, loquacious little person who can be depended upon to accommodate herself to almost any imaginable circumstance, and for whom in a back-yard it is impossible not to conceive a strong, unconscious affection.

As for those objections to and alleged nuisances of fowl-life in the great towns, they have foundation, so far as I can discover, in only one particular. The crowing of a cock beneath one's bedroom window may justifiably be described as a nuisance, inasmuch as it has the effect of awakening one at an untimely hour. The representations of three householders will procure a magisterial injunction against such annoyance; but unless a person is peculiarly obstinate, or is bent on giving his neighbours as much trouble as possible, he can very easily be accommodating. After all, what is a cock doing in a back-yard? He is eating a great deal, certainly; but far from being of any use, he would be much better out of the way. Chicken-rearing in really confined quarters is an unsatisfactory and profitless game—much better is it to buy pullets of reliable blood when the stock requires replenishing.

But to return to the alleged nuisances. It is commonly asserted—by those officious gentlemen who represent the sanitary authorities—that poultry-keeping under confined conditions is an unsavoury and undesirable pursuit. A ridiculous generalisation! Because a few lazy or careless people have from time to time been summoned for overcrowding live-stock or keeping it in an unclean condition, is the whole hobby to be condemned? Anyone who has observed fowl-life in great towns knows that poultry-keeping is as a rule the cleanest of the whole gamut of hobbies, and that none but a municipal official could possibly take exception to it.

Then there are other and rarer, stranger phases of town poultry-keeping than that of the back-yard. In all great towns you will find pieces of waste land in the centre, perhaps, of the most populated part. If it is a shipping town there will be timber-yards, disused wharves or sidings down

by the docks; if a manufacturing town, there will be strips and squares of ground as yet unbuilt upon; and in any of these places you may quite probably come across a few contented members of the feathered population of that city. A timber-yard, for instance, is a pleasurable haunt; there are places to dust in, to perch on; there are shade, sunlight, and shelter. Imagine such a place! Timber piles and banks, logs, chips, and wood-dust, sheds, and a sunny open yard; probably a fence on one side, with a hole in it through which the hens can pass into the master's garden and their own small house. A dozen Black Minorcas and White Leghorns, shall we say, scratching and foraging in that old yard throughout the day—living on the contents of the stock-pot as a morning meal and a half-dozen handfuls of "pigeon" corn as an evening repast. Happy should these fowls be; none the less well should they lay because theirs is a timber- rather than a farm-yard, or because they are surrounded by houses instead of haystacks.

Again, picture to yourself a mews at the bottom of a narrow street, a dark shut-in place, cobble-stoned, and very noisy. A mews is usually given up to horses, cats, and a ribald crew of coachmen, grooms, and "helpers"; here there is in addition a select band of hens. Miscellaneous they are, with no pretensions (I hope) to breed or strain, fat and prosperous, occasional layers, but very, very valuable to the dwellers in this mews. Treasures and treasured, they are never in the slightest want. Often you will see them picking around some four-legged beast, who, after the manner of his kind, is squandering three-quarters of the contents of his nosebag upon the ground. Many such meals go begging in the course of the day.

In years gone by, doubtless, the domestic fowl was a common enough object in the thoroughfares of London. In coaching days, when Piccadilly, the Monument, or Borough High Street rang from morn till eve with the blare of coach-horns and the rattle of coach wheels, the cocks and hens of the inn-yards, meandering into the street and the hostelry itself, were picturesque but little-headed figures in those bustling scenes. Charles Dickens, greatest of observers, never penned a more delightful description than that contained in "The Uncommercial Traveller" of the hostelry in the Borough and its humble characters. The fowls that were in the habit of walking into the crowded public "bar," of pecking about among the company's legs, and (according to my recollection) annoying exceedingly some members of the company; the cock; his wives; their habits and behaviour—all faithfully, humorously described as no other could have described them, as no other would have thought twice about doing so.

Well, those characters of Old London are gone, and Charles Dickens is gone. The fowl-life of the great towns is concentrated into dingy back-yards, into timber-yards, building sites, and waste riverside places, into dim stables, and dark back streets. Perhaps the working-classes,

in the growth of their education and thought, have begun to feel a craving—a craving for some small interest or pleasure or occupation after their day's work is done. Sincerely is it to be hoped that this is the cause of the great recent growth of "back-yard" poultry-keeping.

SOME FEEDING PROBLEMS.

AT the close of each year, when the poultry-keeper comes to make up his profit and loss account on the season's trading, two items on the expense side are certain to arrest attention, and much thought is given to the question whether a considerable saving cannot be effected in both directions. We refer to the cost of labour and the large proportions of the food bill. These are two very serious factors in the working of every farm—so serious, in fact, that if not given due attention and economy practised at every turn, the balance on the year's work may be on the wrong side of the profit account. We believe that an alteration can be effected in the latter, reducing the cost and at the same time increasing the value to the birds; but one thing is certain—namely, that poultry-keepers must devote more thought and time to this question if it is to be dealt with successfully. Poultry-keepers are too apt to ring the changes on certain feeding-stuffs and foods, by the way, the true value of which they little know, feeding them in a haphazard fashion, caring little or nothing as to the effect one may produce upon the other, whereas there are a number of substances the use of which will bring better results and at the same time cause a considerable saving in cost. We propose to treat the whole question of feeding from a broader standpoint than has hitherto been regarded by those who have written on the subject, in the hopes that those who look after their fowls with a view to profit may be guided to follow our suggestions, and in the light of their own experience, not only to curtail their food expenses, but to feed to their poultry just those foods in rightly mixed proportions that will produce the best results.

For many years past—in fact, for over a generation—the ablest chemists in this country and on the Continent have devoted their energies to a study of the laws of animal nutrition. Within recent years the American experiment stations have also added to our knowledge of the science of stock-feeding, and to-day there is available to the farmer a vast fund of information

dealing with foods and feeding. There are a large number of practical men, however, who are firmly convinced that the only knowledge worth having is that gained by experience and that which they carry in their own heads. But surely knowledge must be equally valuable whether found in books or in the minds of those who practise stock-feeding; and, furthermore, that knowledge which is printed will live long after the author is dead, whereas the other dies with the possessor. At the same time, we realise that the whole question of feeding is an art and not a science, and that experience and judgment must rule in its successful conduct; but although we hold to this belief, we further hold that the stock-keeper who, in addition to experience, possesses some knowledge of the composition of the nutrients of foods, and has, moreover, considered how the animals grow and are nourished by them, is certainly thereby better able to feed economically the animals under his care.

There is a vast fund of information available to those who desire to dip more deeply into the subject—information which is the accumulation of knowledge obtained from both practical stockmen and scientists; but although much has been learnt there is still much more to learn. This is particularly true of feeding poultry. The data contained in the published bulletins and reports of experiments deal almost exclusively with the feeding of larger stock, and but little has been attempted in connection with fowls. True, feeding experiments have been carried out in this country, and more so in Canada and America; but as yet the ascertained facts are very meagre compared with those which are known relative to larger stock. Until such time as opportunity is given to us in the United Kingdom to make tests along this and other lines, we can but gather particulars in relation to other stock, and then consider how far these facts are likely to be applicable to our own needs.

We have a solid basis on which to work, for the nature and analysis of the different feeding-stuffs is understood and known; but this is prac-

tically all that is known at the present moment. It is not sufficient to be able to refer to a table that gives the relative proportions, or the percentage proportions, of the various constituents of a food, for there are two very important points to be ascertained—namely, palatability and digestibility. Perhaps the former may not be of such great importance; but as yet it has to be proved that fowls do not select their food guided by its palatability. For ourselves, we believe that this plays a much larger part than has before been conceded, and that it should be taken into account in the choice of a feeding-mixture. We are aware that sight has much to do with the case in point, and that birds frequently fight shy of a coloured feed; but this shyness is very quickly dispelled. There can be no doubt, however, that the question of digestibility is important, for the value of a food must depend, not on the proportion of the various constituents of which it is composed, but on the proportion between the digestible constituents.

The digestibility of feeding-stuffs must not be confounded with their final nutritive effect. Whilst two animals may each digest the same amount of nutrients from the same weight of a given food, one may give a far better return for the material taken into the body. The utilisation of the nutrients of feeding-stuffs is determined by breed, individuality, and the condition of the animal. In studying the digestibility of a given food, the chemist first analyses it to determine the proportion of each of the nutrients present. Weighed quantities of this food are then given to some animal, and the solid excrement voided during the trial is saved, weighed, and samples are analysed. With a knowledge of the amount of each nutrient fed, and of how much reappears in the excrement, the difference is held to be the proportion digested. This work has been carried out with a very large number of feeding-stuffs and in connection with a number of different animals; but no experiment or test, as far as we have been able to ascertain, has been conducted along similar lines with poultry. We can only make note of the effect the varying methods of feeding has upon larger stock, and then deduce our arguments from that. It is to be hoped, considering the value of poultry-keeping as an industry of national welfare, that under the Development Bill adequate provision will be made for a series of tests and trials relating to those problems that are constantly claiming the notice of those who practise the work, and in this way definite facts would be obtained. The analysis of feeding-stuffs shows that there are six groups of compounds present—namely, (1) water, (2) nitrogenous substances, (3) fats, (4) starch (carbohydrates), (5) ash, and (6) fibre. We leave the discussion of the formation of

these compounds to a future issue, but refer to them here, for in introducing the subject it is necessary to refer to these constituents. The digestibility of foods depends to a very great extent on the animal to which they are fed. For instance, from 30 to 70 per cent. of the crude fibre, composed of the cellulose walls of the cells which go to make the food, is digestible in the case of ruminants, while for the pig and horse it is considerably less. From the little we already know of poultry, it would appear that they are somewhat similar to pigs and horses in this respect, but whether they are able to digest slightly more or less of the crude fibre it is impossible to say. The larger utilisation of this cellulose by ruminants is probably due to the fact that the food undergoes more thorough preparation for digestion in the primary stomachs. It may be taken, however, that the addition to a ration of a food rich in nitrogenous matter aids the digestion of cellulose. This has been proved to be the case with animals, and we believe it applies to fowls.

From the data collected with reference to animals it appears that, contrary to general opinion, green foods are no more digestible than the same fodder when carefully preserved by drying. In practice, however, much of the finer parts of the plant are lost by breaking off and falling to the ground during the process of curing. Again, it is shown that crushing, grinding, steaming, or fermenting food does not increase its digestibility, although its palatability may be increased; in fact, it has been proved that scalded or fermented wheat-bran when fed to oxen showed decreased digestibility. This is antagonistic to the belief held by the majority of poultry-keepers. Whether the same result would be obtained from tests with poultry constitutes one of the problems we have yet to solve. We have stated above that horses—and we may put poultry on the same level—do not digest as much of the fibre as do ruminants, and the same may be said with regard to the total dry matter contained in the food; but it may be taken that the richer the feeding-stuff the more nearly does the horse approach the ruminant in the powers of digestion. But at the same time, when a rich carbonaceous food is fed in conjunction with a coarse substance, the digestibility of the coarse fodder is not increased; in fact, the addition of a quantity of carbohydrates, such as sugar and starch, to a ration of coarse feed may reduce the digestibility of the nitrogenous material and the crude fibre of the coarse fodder. Further, the addition of fat to a ration does not increase the digestibility of the other constituents.

Future Instalments of "Some Feeding Problems" will be found in the Production Section.

WHO'S WHO IN THE POULTRY WORLD.

MR. JAMES TURNER.

ONE often hears it stated that in the Fancy the novice never has a fair chance of getting to the top in the exhibition arena. That this statement requires much qualifying is beyond doubt, and there is no better example of this than in the case of Mr. James Turner. It was only about five years ago that he commenced to keep prize poultry, yet his birds are well known, and often secure the very highest honours at the chief events of the year. At the late Dairy Show, in a class of 51, a pullet he bred won first prize and cup for the best of its variety, for



MR. JAMES TURNER.

which almost one hundred birds were competing, while at Birmingham Show in the class for cocks his two exhibits secured cup, special, first and third prizes. Of course these are merely some of his latest wins; his complete list is a lengthy one.

The variety specialised in at Bentham, where Mr. Turner has a fairly extensive poultry establishment, is the Buff Orpington. When he entered the poultry Fancy he did so by purchasing two breeding-pens, and it has been by carefully breeding and in-breeding from

them that he has built up his reputation, which even in so crowded a Fancy as the Buff Orpington—perhaps the strongest of the present day—is a good one. Not only is his particular strain of fowls known at home, but he has shipped birds to many parts of the world, and some which were sent out to Australia won the highest honours in that colony.

Mr. Turner is among those fanciers who like to see to their own birds, hence he does not employ a professional poultry-man; but he is ably assisted by his wife and son, both of whom are most enthusiastic poultry-keepers. When hatching his chickens, which he does as early in the year as possible, he generally uses incubators; and, to ensure their being hardy, he rears the whole of them in the open fields and in brooders. And what that means can be understood only by those who know that bleak corner of Yorkshire in the northern division of the West Riding. As to rearing the chickens, the subject of this sketch is a strong believer in the "dry chick feed" system for the first five or six weeks.

Mr. Turner has always been interested in his breeding of prize stock, and he has won at such important fixtures as the Royal, the great Yorkshire show, and the Royal Lancashire, with hunters which he has bred, while he has also bred Airedale terriers with success. He is a typical Yorkshireman, and is fond of all outdoor games, his favourites being golf, cricket, and tennis.

MR. JAMES DRYDEN.

MR. DRYDEN was first engaged in poultry experimentation twelve years ago at the Utah Agricultural College Experiment Station. At that time the number of experiment stations doing anything in the line of poultry husbandry could be counted on the fingers of one hand without using all the fingers. It was pioneer work. Attention had not been focussed on certain problems as it has to-day. Methods of experimentation had to be worked out, and appropriations were small and unwilling.

He was the author of five bulletins published at the Utah Station, all of them being reports of investigations made at that station. The first contained probably the most authoritative data up to that time on the yearly consumption of food per fowl and of the profits in egg-production. It created a new interest in certain quarters in poultry-keeping, and the demand was so great for it as to surprise the Utah authorities. It showed the possibilities of the industry. The same bulletin contained a report of results of tests for egg-production of old hens and pullets, which has been of great value to the industry. Another test reported in the same bulletin was on the value of exercise to the laying hen.

Mr. Dryden's work at Utah was interrupted when he left the Utah Station for the Montana Station, and, later

when he took charge of the Cyphers Company poultry farm at Buffalo, N.Y. On his return to the Utah institution he again took up this work. A trap-nest designed by him at the Utah Station some eight years ago is in use at the Utah, Oregon, and Montana Stations, and the Maine Station has recently adopted it, or one practically the same. His incubation work has probably brought him



MR. JAMES DRYDEN.

more into notice than any other special work. He was the first to investigate the carbon dioxide theory. He made the discovery that there was more carbon dioxide under the sitting hen than in the incubator, contrary to prevailing opinion. His early work on evaporation of eggs during incubation was the first of the kind, and showed that the evaporation was too great in the usual incubator.

Mr. Dryden was born on a farm in Ontario, Canada, in 1863, where he grew to manhood. He was connected with the Utah institution for twelve years. In 1907 the Oregon Agricultural College established a department of Poultry Husbandry, and he went to Oregon to take charge of that department. This institution is located at Corvallis, Oregon. He is first vice-president of the International Association of Poultry Instructors and Investigators, organised at Cornell University in 1908.

MR. D. SINGER THOMPSON.

AS the conductor of the New South Wales Laying Competition, Mr. D. S. Thompson is known by name to nearly every poultry-breeder in this country. Born in Aberdeen in the early 'sixties, he was educated at Keith, in Banffshire, and remained in the North until he was nineteen years of age. He then left Aberdeen for London to enter the service of a very large export house, and in 1882 sailed for Sydney, under engagement to the firm of the late Anthony Hordern, exporters to Australia.

He has been a fancier and breeder all his life, though during his sojourn in London active indulgence in his hobby was not possible. During the twenty-five years he has been in New South Wales he has judged at many shows—including the Sydney Royal—and has written many articles on poultry for various journals



MR. D. S. THOMPSON.

throughout England and America, as well as in his adopted country.

Mr. Thompson is a cousin of the late Sir George Thompson, M.D., K.C.B., Surgeon-General in the Indian Medical Service, who was also a native of Aberdeen.



Poultry Club Matters.

As there appears to be much confusion concerning certain matters which have been dealt with by the Poultry Club, it may not be out of place here to refer to one or two. No doubt most readers are aware of the fact that the Poultry Club election of 1909 has been decreed invalid, and that another election is not to take place until towards the end of the present year. In the report of the proceedings at an extraordinary general meeting of the Club which was held at the Crystal Palace on November 17, 1909, it appears that the recommendation from the Council, passed at an extraordinary Council meeting on October 22, and to the effect that the whole election be conducted afresh, was lost by a large majority. And on a member asking if the officers elected at the recent election, or those elected in October, 1908, stand, "the President ruled that those elected in October, 1908, remain in office till September, 1910." What those officers elected in October, 1908, had to do with the recent election, I, among others, would like to know. To some of us who did not attend the Palace meeting the President's ruling is, to say the least of it, decidedly perplexing.

Elections.

It may be as well to point out that, in accordance with the new rules, which came into force when the Redistribution Scheme was completed, twelve vice-presidents were elected in 1907. And so that "one-third of the vice-presidents by rota shall annually retire," it was thoroughly understood that the four obtaining the top number of votes were elected for three years, the next four for two years, and the four which came at the bottom of the list for two years. The 1908 Year Book contains the names of the twelve vice-presidents who were elected in 1907, and also those of nine committeemen whose terms of office finished in 1908 and 1909 respectively. It will thus be seen that the four vice-presidents whose names were forward for election in 1909 came into office in 1907. The four vice-presidents who were elected in 1908 were elected for three years, and consequently do not retire until

September, 1911, or at such time as the results of the 1911 election are made public. It is a small matter, maybe, but it is a pity that the mistake has gone into print, coming from such an authority as the President.

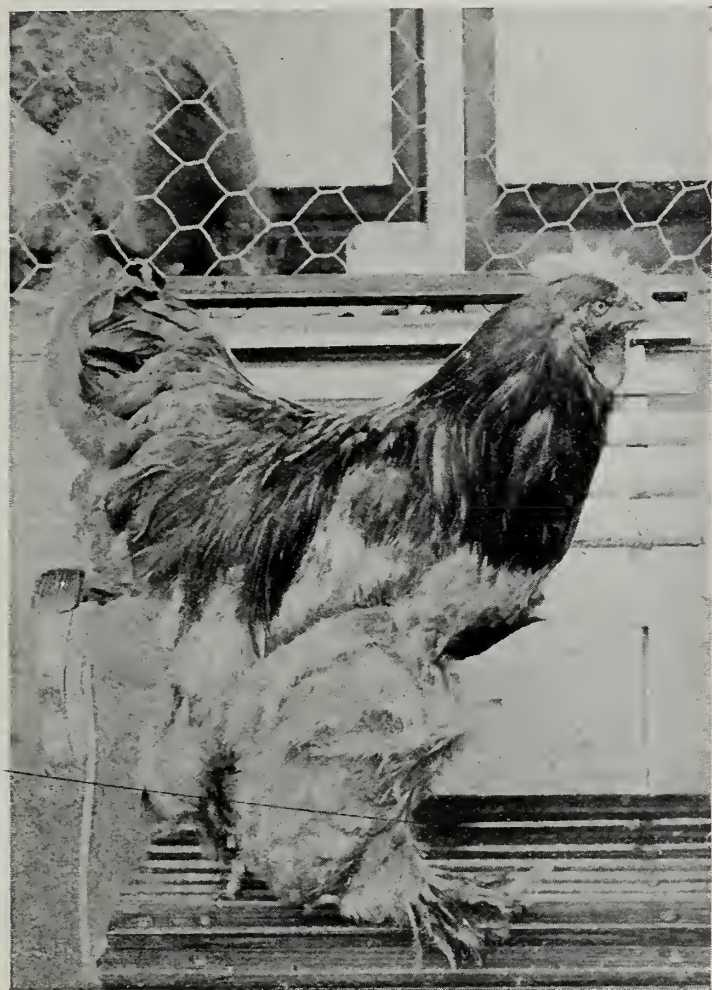
Where Are We?

Some members are not unreasonably asking the above question! Is it to be understood that the four vice-presidents who were elected in 1907 (not in 1908) to retire in 1909, as well as the five members of the old committee whose term of office was up last year, are to keep their seats until the results of the 1910 election are known? If so, will the other vice-presidents have a year added to their terms of office? If the one, why not the other? It was, after all, a small matter which brought about the invalidity of last year's election; but rules are rules. More than seven days were allowed for the return of the voting forms, and seven days are stipulated in the rules. However, some of those members who were due to retire last year want to know whether they are eligible to "sit" on the Council until the end of the present Club year. A friend who is "learned in the law" informs me that they are not eligible. But what has the Poultry Club to say on the matter? Perhaps the Council will take legal advice on it, and let its members know just how they stand.

The Royal Show Judges.

It is harking back somewhat to mention the Royal Show of 1909; but since "an ugly rumour" connecting the selection of judges with the Poultry Club has been afloat, and has recently been referred to in the columns of a contemporary, I think it is only fair to give the facts of the case. Neither the Poultry Club nor its Council has anything whatever to do with the selection of judges for the Royal Show, nor, for the matter of that, for any other show. That members of the Club did actually officiate as judges may be taken as a compliment to the Club; but, so far as that body is concerned, there the matter must rest. It was stated in another contemporary that: "The Royal Show had first arranged

other judges than those who eventually judged, owing to their being under the impression that as the Show was under Poultry Club rules they must have Poultry Club judges, and imagined that those advertising in the 'Year Book' were specially Poultry Club judges. This was pointed out to them as an error on their part; but the matter had to stand for this year as arranged, as the schedule had been sent to the printer." This statement is "passing strange," since only one of the three gentlemen who judged the poultry at the Royal Show of 1909 has ever advertised in the "Judges' Cards" of the Poultry Club's Year Books. As a matter of fact, the three other judges with whom "the Royal Show had first arranged," who



A BUFF COCHON COCK. [Copyright.]

The Property of Mr. C. Causer, of Brazil.

A Winner at the Agricultural Show at Bello Horizonte, 1909.

certainly are not members of the Poultry Club, were the nominees of a private individual, who also is not a member of that Club; and had they been elected, would anything have been said against it by the contemporary in question? I doubt it.

Wider Representation.

Among other matters which were brought forward at the extraordinary meeting above referred to was that of wider representation. One set of propositions, which

was carried by fifty-five votes to one, was that "the number of vice-presidents be twelve for England and one each for Scotland and Wales"; and "that for the purpose of election England be divided into four sections or divisions, three vice-presidents to be elected for each division, the one receiving the majority of votes to remain in office three years, the next in order two years, the next to retire at the end of the first year." A correspondent to the RECORD, in his letter this month on the new Poultry Club rule concerning judges at shows held under Poultry Club rules being members of that body, has said what usually happens at general meetings, so I do not intend to enlarge on the point here. But it will be decidedly interesting to see how the division plan works, and if it will result in anything like representative attendances at the Council meetings. The idea (moved by the Lancashire Branch) that one delegate be elected for every fifty members is certainly a sound one, and I am not surprised that the proposition was carried by a large majority.

Peripatetic General Meetings.

In my notes to last month's ILLUSTRATED POULTRY RECORD I said that a feeling for reform in the Poultry Club is abroad. Here, then, we have some attempt at it. Another move, which was carried unanimously at the Palace meeting, is that ordinary general meetings of the Club shall be held at three of the leading shows in the provinces during each year. Who shall say now that the Northerners, the Easterners, the Westerners, the Midlanders, and the rest, if there are any, are not being catered for to the full! Who shall say now that the Poultry Club is a "Southern clique," and that "the power is in the hands of a few living in one particular district"! But it will be interesting to see how the reforms turn out.

THOUGHTS ON THE DUCK FANCY.

By A. T. JOHNSON.

ONE of the least pleasing features of the poultry world to-day in this country is the decline in the keeping of ducks. We are repeatedly being brought face to face with the fact that, save in a few districts, market ducklings are quite difficult to procure, and that classes for them, which used to fill fairly well at rural and agricultural shows, are now either struck out of the schedules or remain a source of loss to the executive. Twenty years ago there were good classes of Rouen at country shows, and these were exhibited by *bonâ-fide* amateur fanciers; but to-day a very different condition of affairs exists. If the Rouen were simply passing through a phase of unpopularity and its absence were counterbalanced by some new favourite, matters might have a brighter aspect. But to fill the Rouen's vacant place no breed or variety has come, for although the Indian Runner (of which more anon) has "caught on" to an extent almost unparalleled in the history of domes-

ticated water-fowl, its increase cannot be said to balance the deficiency in the heavier breeds. There are some people, it is true, who gradually gave up the latter to go in for Indian Runners ; but, broadly speaking, the great bulk of Indian Runner fanciers are men who have never kept other water-fowl to any great extent.

There is no doubt that great strides have been made in perfecting Aylesburys and Pekins from a fancy point of view. Indeed, it is probable that during the past few years we have seen specimens of these ducks which were nearer perfection than anything else in the Fancy. But the "crack" exhibitors of these breeds can be counted on the fingers of both hands. There does not seem to be that rank and file among duck fanciers who are found in other classes of poultry-keepers, and who, after all, are the very mainstays of the Fancy.

Perhaps it may be argued that ducks do not appeal to the eye ; but that contention does not stand for a moment when it is remembered that the names of many most honoured and successful fanciers are associated with the breeding of exhibition ducks. Rather am I inclined to think that the present aspect of affairs is due to the beginner or amateur—call him what you like—not being given a chance. Who, for example, has not seen the same owner taking all the cash prizes in a show year after year with monotonous regularity? Is it reasonable to expect the "small man" to enter his birds under such conditions, and so court certain defeat? No ; he keeps his birds at home, or gives them up in disgust, and leaves the sparsely-filled classes to their foreseen fate. The result of this is that the whole world of ducks—both fancy and utility—suffers. That the same thing goes on in other branches of poultry I am aware ; but it does not seem to be brought home to one with such force as in the case of ducks. The amateur exhibitor can often get a look-in somewhere at a show, save when he is exhibiting these water-fowl ; but with the latter it is too often a hopeless and disappointing task to attempt to succeed. Surely there are many instances where the local and amateur Fancy might be encouraged by the introduction of "novice" or "limit" classes, or even by confining some specials to beginners or those who most need encouragement.

There is much to be said regarding the adaptability of the locality for duck-breeding. Only a small percentage of the people of a parish have the proper facilities for rearing exhibition ducks, especially Aylesburys and Pekins, but I am convinced that the facilities which do exist are not appreciated, and that, were this section given a timely fillip that would enable the amateur breeder to realise the fact that there is something in the duck Fancy for him, we should all be better off. When once the fancy side of duck-keeping is resuscitated the utility department would immediately improve. I do not pretend that the latter is dependent upon the former, but that we cannot extend the Fancy—provided it acknowledges the supreme importance of useful qualities—without affecting, for the better, the utilitarian side of the business.

And this brings me to the old, old subject of the

influence of the Fancy on the economic properties of breeds—not that there is anything new to say with regard to it. I do not wish to lay upon the shoulders of fanciers the burden of having ruined the laying properties of this or the other breed of duck and, by so doing, helped to send the latter into disrepute in utilitarian eyes, because (no matter whether he has done so or not) the fancier-breeder has every right to breed as he likes. He can go his own way, and the utilitarian, if he has any oil in his lamp at all, can go his. Unfortunately, however, the latter does not always see it in that sense. He buys his ducks for laying purposes from breeders of exhibition strains, and as he is sometimes disappointed, he immediately blames the Fancy. Some modern exhibition strains are no doubt as good as, perhaps better than, their predecessors ; but they are those who are owned and bred by fanciers who recognise the extreme importance of utilitarian properties in their strain. Would that there were more of the same way of thinking !

The popularity of the Indian Runner is due to the fact that it is such a remarkable layer. Years ago, when I first saw one of these birds in a show, the late Mr. Henry Digby, who was judging, told me that the future of the breed was assured because of its grand utility qualities, combined, of course, with its peculiar adaptability for doing well in almost any situation so long as the birds had liberty. And, in his ever-remembered, jovial manner, he said, "They are as prolific as rats, and will breed on the top of a brick wall !" Scarcely any other breed of poultry has made such steady progress as the Indian Runner, but some of us are wondering whether that progress will be maintained. Is it not possible that too much attention is being given to type and style? At any rate, it is a great source of regret to me to notice that even markings are being sacrificed for type, and many specimens appear to be in danger of developing into that mathematical definition—"length without breadth." All breeders will agree that one cannot carry any point to excess without impairing some other point. But let us hope that the Indian Runner will not lose its prolificacy, and that utilitarians will, without further delay, secure their own strains of this valuable breed and stick to them.

I always refrain from finding fault with the Fancy if it can possibly be avoided, for it is, after all, the very rock foundation of our poultry industry. But when, as in the case of the Indian Runner, there seems to be some fear of the fancier's zeal carrying him too far, it is time to speak. The ghost of the last of the Indian Runners might even be a more fearsome thing to haunt one's dreams than the threatened spectre of the last survivor of Modern Game ; but instead of this personal and somewhat selfish aspect of the future, the fancier should, while there is yet time, rescue the Indian Runner from sacrifice. There will be many readers who will not agree with my contentions ; but, I ask, is there anyone who can seriously believe that prolificacy (which has been the making of the Indian Runner) is consistent with the type of duck now in vogue as "the ideal" ?

MEN AND MATTERS.

By W. W. BROOMHEAD.

A White Wyandotte Specialist—A New Club for Orpingtons—Palace Trophy Winners—To Encourage Novices—Breeder-Judges—Plymouth Rocks—Blue Langshans—1910 Club Shows—La Bresse Fowl.

A WHITE WYANDOTTE SPECIALIST.

There can be no doubt about it that of recent years the supposed delicacy of white-plumaged fowls has been proved to be a fallacy ; and it is equally true that one of the chief varieties, if not indeed *the* chief variety, to bring about this state of affairs is the White Wyandotte. It has on more than one occasion proved its worth as a great layer in the annual laying tests ; and it is not rare to find the White being kept on farms solely for its utility properties. As an exhibition fowl it ranks very well with the best, and, given reasonable classification, it takes its place among the popular breeds whose classes always fill well. There are many fanciers who specialise in White Wyandottes, but of them few hold such an excellent record as that gained by Mr. C. N. Goode, of Peckfield Lodge, South Milford R.S.O., Yorkshire ; in fact, I question if anyone has scored so well with the variety in recent years. At the United Wyandotte Club Show at the Crystal Palace last year Mr. Goode's prizes were 1st and 3rd in the cock class of 19 entries ; 1st and 2nd in hens, 29 entries ; 1st in cockerels, 24 entries ; and 1st in pullets, 28 entries. This at *the* event of the year ! But Mr. Goode's birds have been "at the top" for some seasons now at the chief shows ; and after one has paid a visit to the Peckfield yards, and "done" the round of the fowls, one is not surprised at the result.

A NEW CLUB FOR ORPINGTONS.

The Jubilee Orpington Club has at last been inaugurated, "for the furtherance of the breed and to protect its interests," and its first club show was held at Watford last month. How it fared for entries I am unable to say, but it should have done well, since rather more interest has been taken in the variety of late, and the names of two or three novices have been figuring well up in the prize lists. That the Jubilee (the name *is* an awkward one) is a very good all-round fowl goes without saying, although my experience is that, as regards its utility properties, it excels as a table-fowl rather than as a layer. I have kept better winter layers, both for the size of the eggs and the number of them, although with their rich brown shells they are very easily marketed. But few fowls fatten better or give a more pleasing appearance when dressed for the table. As a fancy variety it is a charming one, the three colours and the regular spangling giving it a most beautiful appearance. The new club has started well with challenge cups, and it is to be hoped that members will give the variety the fillip it requires. Mr. C. Watson, of Oxley, Watford, is the hon. secretary.

PALACE TROPHY WINNERS.

To win a trophy at the International Show is indeed a great score, and more particularly to secure those for

best male bird and best female in the show. It is some time since one of these cups was awarded to a Bantam, but at the recent event the Poultry Club's 30-guinea challenge trophy for the best cock or cockerel was won by Mr. Hugo Ainscough's Black-Red Game Bantam cockerel, the bird also gaining the champion challenge shield, value 15 guineas, and Sir James Blyth's challenge cup. The hen challenge cup went to Mr. Alex. M. Prain's White Leghorn hen. Among other cup-winners were Mr. George H. Procter's Buff Cochin hen (champion challenge trophy), Mr. Arthur C. Major's Silver-Grey Dorking cockerel (cup for the second best cock or cockerel in the show, reserve for the championship, challenge cup for the best of his variety, and two medals and trophy for the best Dorking), and Mr. F. Smalley's Pile Modern Game Bantam pullet (challenge bowl). The Rosecomb Bantam special went to Mr. E. Wright, and that for the best Orpington to Mr. George M. Bartlett.

TO ENCOURAGE NOVICES.

It has often been said that in these days of new varieties little encouragement is given to novice fanciers to take up the old-fashioned breeds, and that nothing is done to attract "new blood." It is pleasing to find, therefore, that the Brahma Club, at its annual meeting, resolved to offer a limited number of breeding-pens of Dark and Light Brahmas to novices and beginners. Only reliable breeding-pens will be selected, and they will be dispatched in the order of application. At the next club show special classes will be provided for novices, and pieces of plate and cash prizes will be given for competition among those who have not previously exhibited. Full particulars of the scheme, which is a move in the right direction, can be obtained of the hon. secretary of the Brahma Club, Mr. Arthur E. Ward, Great Warford, Moberley, Cheshire.

BREEDER-JUDGES.

The Variety Orpington Club has recently considered a proposition that club show judges shall have bred each variety they have been called upon to judge, and the matter is to come before the general meeting of the club this month. Presumably the placing of some of the awards at the club shows of the past has not been accomplished in a satisfactory manner ! A judge rarely does please everyone, but the chief thing with him is to satisfy himself. There are many excellent breeders who are "all at sea" when it comes to judging a strong class ; there is many an excellent judge who may never have bred the variety on which he adjudicates, and yet places the cards well. It was only the other day that I was discussing the subject with one of the oldest poultry judges living. During the past twenty years or so he has judged more classes of a certain breed than anyone else can claim to have done. Yet, although he has been a breeder and a most successful exhibitor of other fowls, he has never bred any of the varieties of the breed in question. His decisions, however, please the majority.

PLYMOUTH ROCKS.

I notice from a recently-published report that the Plymouth Rock Club has decided that in future open specials will be given at shows where the first-prize money is 15s. and over. Presumably such specials will be withheld from the majority of shows, since comparatively few offer such prize-money. A club special generally draws a good entry; sometimes it keeps competition away. Is this a move to benefit the novice? The Buff Plymouth Rock Club, which is practically managed by the same body, has passed a resolution to go before the general meeting: "That canvassing for votes in connection with election of Club judges be a disqualification." Bigger clubs might do worse than take the hint. The canvassing in connection with the abortive Poultry Club election was overdone.

BLUE LANGSHANS.

I hear that "the interest of the Fancy in Blue Langshans has increased, in common with all blue varieties of fowls." In his annual report the hon. secretary of the Blue Langshan Club considers it "a matter for congratulation that during the year many instances were recorded of Blue Langshans taking high honours in competition with Blacks, the great improvement in type of the former having made this possible." Yes; some look through blue glasses. Many have been wondering where the Blue Langshan has got to of late, and it was rumoured that the variety had become almost extinct. I wonder where they were when the Dairy Show was held last year! Eight entries turned up, certainly, but from three yards only. At the Club Show at the Palace there was a better muster, but were there more than half a dozen different yards represented? And those of us who do not wear blue glasses thought that the Blue

Langshans do not make much headway and that their type is far removed from that of the Blacks. Maybe the present craze for blue-plumaged fowls will bring the Langshan of that colour more to the front than it has been since it was recognised as belonging to the Langshan breed. Certainly the club which looks after its interests is making such an attempt, in that the hon. secretary has been empowered to offer specials for Blue Langshans at any shows having classes for Langshans if the same are open to Blues as well as to Whites and Blacks.

1910 CLUB SHOWS.

It is best to get arrangements for club shows made well in advance. The United Wyandotte Club has decided that its next event will be held in connection with the International at the Crystal Palace. Since it caters, and caters well, too, for all varieties of the Wyandotte, the doors of the "Combined Specialist Clubs' Show" are closed to it; but it is questionable if there is a better venue for a club show than the Palace. The Silkie Club has also decided to hold its 1910 show at the Palace. Four classes will be provided, but the word "white" will be omitted from the description of birds in the classes. Black Silkies were not unknown at one time, but they were never so taking as the Whites.

LA BRESSE FOWL.

An interesting feature of the recent Crystal Palace Show was the section for La Bresse fowls. There were 16 entries in the two classes provided for the breed, and some first-rate specimens were on view. The variety is a decidedly pleasing one from a Fancy standpoint, the blue beak and legs, the dark face, and pure white plumage making an excellent combination. A club for it has recently been formed in this country, and a



A VIEW OF THE POULTRY SECTION AT BELLO HORIZONTE SHOW BRAZIL. [Copyright.]

standard and set of rules have been drawn up and agreed to. The annual subscription has been fixed at a minimum of 5s., and Mrs. Ethel M. Chatterton, of Hamden Green, Smarden, Kent, is the hon. secretary and treasurer.

THE LIBERTY OF THE JUDGE.

To the Editor of the ILLUSTRATED POULTRY RECORD.

SIR,—I think no unbiassed person will deny that the Poultry Club is doing a good work. Taken as a whole, the Council is a body of level-headed men, who at much loss of valuable time attend the Council meetings with open minds, and do their best for the good of the Club and consequent good of the Fancy. It is not with any act of the Council that I propose to deal in this letter, but with a resolution passed at the open annual general meeting of the Club held at the Dairy Show on October 6, when the representative of the Yorks branch moved and unanimously carried a resolution that—"Any judge appointed to judge at a show held under Poultry Club rules must be a member of the Poultry Club (local monthly shows excepted)." Now, I say unhesitatingly that this decision of the Club is a mistake. And I very much doubt whether the same resolution would have been carried had it come before the more quiet and serious consideration of the Council instead of at the annual meeting, where all is rush and excitement, and there are many members present who have not the same opportunities of weighing the pros and cons as have those on the Council, who have the various matters pertaining to the Club's business at their fingers' ends. However, be this as it may, the fact remains that the resolution was duly passed and is consequently now a law of the Poultry Club.

We are all liable to make mistakes. The Poultry Club has made one in this instance, and the sooner it rescinds the resolution the better! In my opinion it interferes with the liberty of the subject, and is inimical to the best interests not only of the Club but of the shows held under its rules. We want all shows to come under Club rules, and all judges to join the Club; but there must be no compulsion, no interference with the liberty of the subject. There are at the present time many good all-round judges of poultry who are members of the Poultry Club, but there are also good men who, for reasons doubtless best known to themselves, have not seen fit to become such. Many of these are men not only of equal ability to, but of as unblemished character as, those who have joined. And they are mostly men not likely to be driven into the Club by any such resolution as the one now under consideration. Rather the reverse. It is, in my opinion, more calculated to "put their backs up" and make them say, "Why should I be forced to join the Club unless I choose to do so? And I won't."

The position of the show executives will be somewhat similar. For many years there was great hesitation on

the part of many shows to come under Club rules. By dint of much hard work this has been greatly overcome, and of late it has been the fashion for shows to adopt the rules in the majority of cases. Writing as one who would like to see every show under Poultry Club rules, it is a thousand pities to pass a resolution which will check the present inclination to adopt the rules, as I feel sure this will do. In the majority of cases show committees are not composed of men with unlimited purses; and, having taken on the responsibilities of a show, they must consider the points that will make it pay. One of the most important of these is undoubtedly the appointment of a judge who will draw a good entry. Many show executives have learned by experience that the saving of a sovereign in a judge's fee is often "penny wise and pound foolish." And if a show committee, having decided that Mr. Blank is the best man for them to engage, finds on inquiry that he is not a member of the Poultry Club, the members will act wisely in engaging Mr. Blank and running the show minus Poultry Club rules.

It seems a great pity to check the various societies from adopting the rules by so overbearing a resolution. If the Poultry Club had passed a resolution recommending all shows held under its rules to give preference whenever possible, to judges who were Club members, no objection could have been taken. Doubtless it would have had weight in the majority of cases when the names of judges came before a committee for selection. But making it a *sine qua non* is not calculated to induce those judges who are not members to become such, or show executives to adopt rules which will include one that may, and in all probability will, hamper their selection of the most suitable judge.—Yours, &c.,

YORKSHIRE HERO.

December 17, 1909.

SHOULD JUDGES BE LICENSED?

To the Editor of the ILLUSTRATED POULTRY RECORD.

SIR,—From the point of view of the County Council Instructor who is not allowed to accept a fee for advice (or as a judge) given within the confines of his county, the payment of a stiff or even moderate fee for a license would certainly be a hardship. I do not know whether I am the only C.C. Staff Instructor who does not belong to the Poultry Club. I have never joined and I am not sure that I shall. Am I, because of this, to be debarred from judging any classes whatever in a show held under Poultry Club rules?

I am a breeder of many years' standing, a breeder of Faverolles for ten years uninterruptedly, for example, though I have never exhibited. Does this count for nothing because I am not a member of the Poultry Club?

I do not wish to complain in any way. I ask merely from a desire for information.—Yours, &c.,

C. E. J. WALKER.

December 12, 1909.



The Future.

Although there may be some looking back into the past—the source of experience—the present work is for the future, and there is plenty to be done to repopulate the fields that have been more or less cleared of available stock by the exhaustive and comprehensive demand of Christmastide. The work of the moment, and that which lies before us, concerns all branches of poultry-production. Egg-production, for eating and hatching; incubation, for stock and table; and matters of mating, for various objects, all demand attention in their regular order. The breeding stock of domestic fowls, turkeys, ducks, geese, and guinea-fowl must all be kept in suitable condition to come into profit at their respective seasons. A sufficiently formidable outlook, perhaps, for the novice, but capable of comparatively easy adjustment and attainment by those who can look back and remember the lessons of the past. Plans for the future should not, however, be too slavishly laid upon past lines without duly considering the probable tendency of demand and competition in every connection, and the reader cannot be too strongly advised to study carefully (and keep for future reference and comparison) the marketing section of this magazine. Production and marketing are complementary the one to the other. The former should never be contemplated without an adequate knowledge of the latter, and all that is implied in the term.

More Eggs.

Those who have followed Mr. Verney Carter's reports and notes during the past year will have gathered that there is a future for egg-production. The reasons do not concern us in this place, but inasmuch as they are sound the question of producing the eggs becomes a matter of even greater importance than it was before the course of events was thus emphasised. Apart from side issues connected with the subject, the outstanding fact concerns the work of actual production, and the poultryman who plans a future increase in his output and an improvement in the quality of his produce cannot

stand to lose under conditions favourable for such a production. It is, moreover, an ascertained fact that there are very few situations in which eggs may not be profitably produced—the supplementary cost of marketing is another matter—wherein this branch of the industry differs from most others. The breeding of chickens, turkeys, ducks, or geese for market is much more circumscribed according to the requirements of the several descriptions, although even this work is successfully carried on by the experienced in many more or less unfavourable circumstances. But with egg-production there is a wider field and a practically unlimited scope for the beginner as well as for those who are not so strange to the work.

Obtaining Them.

More eggs are doubtless more easily desired than obtained, and the majority of those who are in a position greatly to increase their output have much to learn before they can do so. Last year should have taught some important lessons to the egg-producer as well as to the chicken-rearer, not the least urgent being the necessity for more adequate sheltering accommodation than is usually provided. The specialist does not need this hint; indeed, his methods are largely responsible for it, although they may not be approved in all details as suitable for general application. It is upon the farmers that our markets depend for the important proportion of their supplies, and it is to them that we must look for any really serious increase in the future. It is true that a considerable section of this class of producers has made some advance in more modern methods during recent years, as, for example, in the fairly widespread adoption of the colony-house system; but, having advanced so far, there are still further steps to be taken in order to obtain the desired results. The wider distribution of the stock over the land tends to the economy of production—if there is any produce. The work of reformation is, however, very incomplete if it does no more than remove the stock from the farmyard and the neighbourhood of the buildings. Winter quarters

require more careful consideration than they commonly receive, next to which the whole subject of suitable feeding demands attention.

Incubation.

The difficulties attending a sufficient egg-production are being followed in a natural sequence by the consequent shortage of broody hens for early incubation. This is a very common annual complaint of chicken-rearers, but the trouble is now accentuated by the course indicated ; and many who have consistently adhered to the natural method will quickly be confronted with the alternative of a short chicken output or the sinking of prejudice in the use of artificial appliances. As a matter of fact, the necessity has been in some cases so pressing that we have discovered incubators in operation in quite unexpected quarters, and this season should at least benefit the manufacturers. Hatching appliances are now so simple to operate and generally so easy to regulate that the most old-fashioned should not hesitate to use them in the endeavour to maintain production when the natural means are insufficient. We have, however, found that so many men, of the eminently practical and commercial class of producers, make trouble for themselves in their failure to appreciate the conditions suitable for the successful operation of incubators, whereas if they would once realise that such machines require accommodation favourable to an equality of temperature and consistent with free ventilation they would find incubators a blessing rather than—the other thing.

The Incubator House.

The average producer can scarcely afford an elaborate erection for the accommodation of his incubators, nor is such a building generally necessary for his ordinary purposes ; nevertheless, despite some statements to the contrary, these machines cannot be successfully operated anywhere. We have long since learnt that the temperature and ventilation of the room or building are matters of primary importance, especially in view of the fact that when once the machines are regulated it is better to avoid as far as possible any further interference with the regulators. This is, of course, unnecessary if the atmospheric surroundings are favourable to even working. It is for this reason that we believe in a cellar, despite opinions to the contrary, provided it is a thoroughly wholesome cellar. There are, however, on many farms existing stone, or other solidly built, outhouses that are capable of being made suitable ; or failing such available buildings sheds may be erected at a comparatively small cost, but in this case there must be double walls packed with sawdust, or otherwise protected from sudden external fluctuations of temperature. There should also be a boarded ceiling beneath the roof, with a sufficient space between to effect the same purpose ; but ventilation must be sufficient to meet the requirements of the developing embryos and the consumption of oxygen by the incubator lamps.

A PAYING POULTRY-FARM.

By GEO. A. PALMER.

THE poultry-farms at King's Langley are unique. I have watched them from their commencement, and the growth has been steady and continuous, until now there is a stock of over 5,000 birds penned, of 21 pure breeds, besides pens to produce first crosses.

The proprietor, Mr. T. W. Toovey, is a large miller, with one mill for flour at King's Langley and one for feeding stuffs at Hemel Hempstead.

One would think that this was quite enough business for one man, but Mr. Toovey considers this as his work and his poultry and general farming on 275 acres as his hobby. Apart from the mills, the staff consists of one farm foreman and eight hands, and the poultry department alone has three head poultrymen and six assistants. It is no secret that the poultry department pays well, as Mr. Toovey has before now made public his balance-sheet. He attributes his success to loyal help from his



APEX HOUSES AT KING'S LANGLEY.

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head men, who work on a profit-sharing basis ; his knowledge of the corn trade, and ability to purchase foodstuffs at first cost. I also add his own exceptional energy, industry, and business capacity. I will try to give some idea of the farms, the most notable features of which, apart from their extent, are that the whole stock is reared and hatched by hens ; that the farms are in three distinct and separate lots, each under a head poultryman, who is responsible for his own department ; and the system of pure breeding, which is like no other in this country, and of which I will later give a full description.

One of the great features of the place is the economy displayed everywhere. I use Mr. Toovey's own words

where possible: "Simplicity, mobility, and economy are the three watchwords for the plant of a utility poultry-farm." "We had it all to learn, but now that we have a workable system I am convinced that there is a great future before the industry." "Experience on all hands seems to me to have exploded the scratching-shed theory for large establishments." Ranges of scratching-sheds were built, and now they are going to be cut into lengths to make open field-houses. Most poultry-keepers get more eggs from fowls properly looked after in sheds during winter than from birds in the open, but Mr. Toovey says there is not enough in it to pay for the extra plant and labour. The first farm is the original one near the mill. One of the earliest pieces of land to be occupied was a rough lot where gravel had been extracted. This is now luxuriant pasture, and the plots

The open houses so much in use are made in the form of feather-edged board, and are 9ft. long, 7ft. 6in. wide at base, and 6ft. 3in. high at ridge. A dry foundation of road sand or ashes is usually placed on the floor, and over this a 2cwt. bale of peat moss, which keeps sweet for twelve months if forked over occasionally. It is found most essential that the floors should be kept dry, as winter laying is most adversely affected: therefore the houses are placed on the highest spots, so that no water can drain underneath them. Mr. Toovey attributes the freedom from disease, which so often breaks out on large farms, to care of the land by treating it with lime, to avoidance of overcrowding, to well-ventilated houses, and also to his system of sanitation. Permanganate of potash is used in all the water, given even to newly-hatched chickens, but is discontinued in very cold



A MOVABLE HOUSE IN A MOVABLE RUN.

[Copyright.]

in turn yield heavy crops mown green for the mill horses. Here and down the meadows by the mill-stream, well within sight from the London and North-Western main line, the land is divided into permanent pens, some a quarter of an acre with one open house and twenty-five birds, others one-eighth of an acre with eleven or twelve birds to each. There are other pens 50 yards by 40 yards for 120 birds, with ten of the specially constructed small houses. The houses in the permanent runs are moved yearly to different parts of the pens, and any corners much used by the birds are heavily treated with freshly-ground lime.

weather. Sulphate of iron is also given regularly in the soft food.

The corn chiefly used in feeding is oats and maize, the latter nearly discontinued in summer. The meals used are "screening meal," the refuse from the wheat-cleaning machinery, which in addition to small and broken wheat has many seeds, including cockle. When no "screening meal" is available, middlings (also called sharps, toppings, dan) is used, with a little barley-meal added. Large quantities of butchers' offal and blood are boiled, with turnips, swedes, or mangolds, and with the liquor mixed in the soft food. The chickens have

dry feed for the first week, and then have four meals of dry food and one of soft daily. The dry feed is mixed on the place, and consists of cracked wheat, canary seed, rice, a little coarse oatmeal, millet, hemp, dari, and grit. The chicken soft food is made up of half fine biscuit-meal and half middlings, with broth from the coppers.

I must now say something on the system of penning the birds on the newer parts of the farms, for there is nothing in England like it. There is now a plant for 1,500 birds on the general farm. There are 70 runs, laid out in two large blocks, with cartways all round. The houses are of the open kind. The birds did well in them last year, and the system favours economic management. A still later plant is on the arable land. "We devised a chicken-house ten years ago, and accidentally made a house in which birds do not crowd. This has always been the difficulty with adult birds if more than one house was in a run." This house is simple enough: 6ft. long, 3ft. wide, 3ft. 6in. high at front, 2ft. 3in. at back. The front is boarded up to 2ft. 6in. high, and the space above is covered with netting, except in the centre, where there is an entrance. This is 1ft. 4in. wide and reaches to the top, but does not come to the bottom within 9in. The shutter which fills the space fastens by a button at the top, and by two tugs catching on the skirting-board at bottom. When let down this forms a ladder board up to the hole. There are ten perches the whole length of the house, giving 12in. of perch room in all. These are fixed 8in. from the ground, so as to allow for plenty of peat moss underneath them. We find in practice that when the birds have filled up the perches they stop going in, so that when settled for the night all the houses in the pen contain about an equal number of birds. This has made possible the plan which is now being carried out, and which works so far splendidly. The idea is to run 300 laying hens to the acre for one year on arable land,

and then move the plant on to the adjoining land, leaving the first free for cultivation, so the field will in the course of a few years be folded entirely over, with what result only a practical farmer can realise. To equalise the manuring the houses are moved across the pen during summer, and only left standing in one line for the winter, on account of having the dry floors of sawdust or sand, covered with peat moss. It seems to me that the first crop taken will have to be a gross feeder, such as cabbages or mangolds, as corn would go down and rot on the over-manured patches. The plot is 300 yards long and 100 yards wide, or about seven acres, with the road round. This furnishes a double row of pens, each 50 by 43 yards, fourteen in all. Each has ten houses for twelve birds in each. The cost was worked out for 1,200 birds, a hundred of these houses, with nest-boxes, at 12s. each, £60; netting and stakes £13 10s.; water vessels, £1 10s.; putting up the pens 10s. 6d. So the total cost of plant for 1,200 birds is £75 10s. 6d., or about 1s. 3d. each. The cost of moving this lot on to the adjoining patch, with trolley for loading up the houses, is about £2—less than halfpenny per bird.

The stock on this farm is purely utility. Mr. Toovey makes no claim to having a show bird on the place. His object is to have the best laying fowls possible, and sufficiently pure to be uniform in appearance and to conform to the accepted standard. I will again use his own words: "I am convinced that the fancy and utility are completely at variance as regards type in most if not all breeds; it is a pity it should be so. Also I know that, for egg-production, constitution is the vital point."

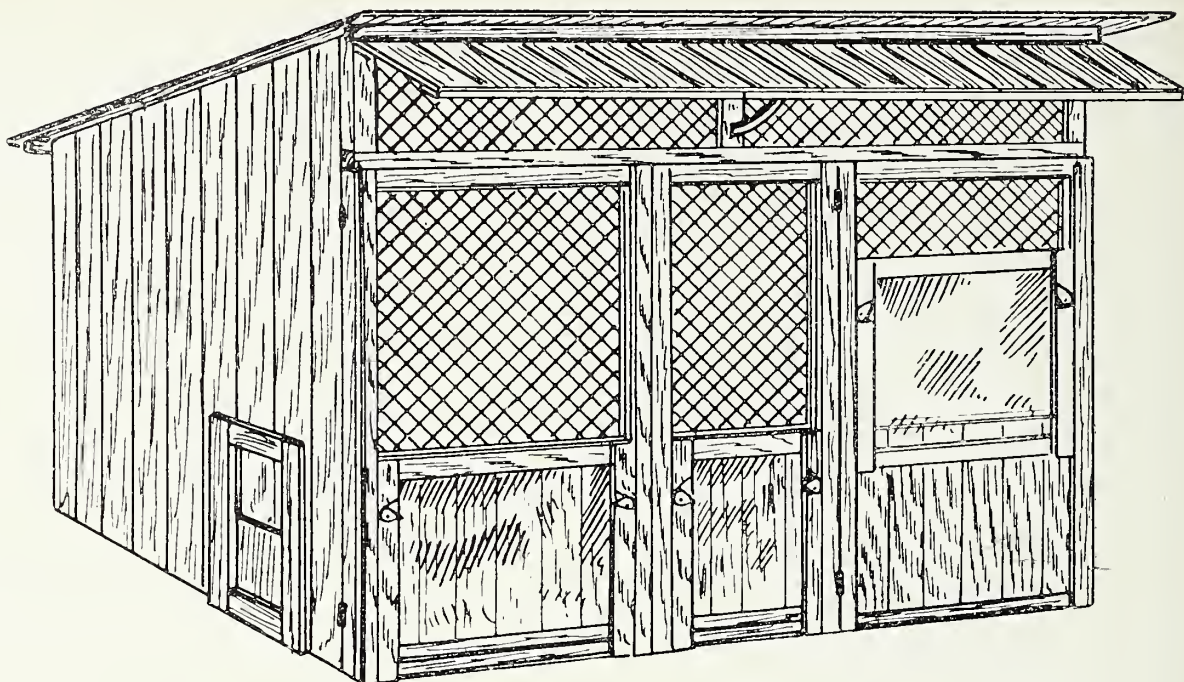
On high ground there is no difficulty whatever in rearing chickens during January, February, and March out in the open fields with no protection but the coops, which have wire shutters in front, and are never closed more than this.



120 FOWLS ON 2,000 SQUARE YARDS

[Copyright.]

A - - - WINTER LAYING- PEN. -



[Copyright.]

COST OF MATERIAL.

	£	s.	d.
2½ squares ¾in. t. and g. matching at 12s. 6d.	1	8	2
65ft. run of 2in. by 1½in. deal at 4s. 3d. per 100ft. ...	0	2	9
150ft. run of 2in. by 1in. deal at 4s. per 100ft.	0	6	0
75ft. run of 2in. by ¾in. deal at 3s. per 100ft.	0	2	3
30ft. run of 1¼in. by ¾in. deal at 2s. per 100ft.	0	0	8
8ft. run of 3in. by 3in. at 2d. per foot.	0	1	4
8ft. run of 1in. by 1in. at 3d. per foot.	0	2	0
Wire-netting, 1s. 6d. ; felt, 2s. 6d.	0	4	0
Nails, staples, screws, hinges, bolts, nuts, &c.	0	3	6
Glass.	0	3	4
Paint and limewash.	0	3	6
	<u>£2</u>	<u>17</u>	<u>6</u>

The pen is built up in sections, comprising the front, which is in three parts (one part forming the door), two ends, back, floor, and roof.

It will be seen that the whole of the front is hinged and bolted to top and floor with barrel bolts, and may be opened right out—a great convenience in many ways. Glass-panelled sliding shutters are fitted in grooves, and these are provided with cams on both sides to enable them to be kept at any height. A perch, with dropping-board under, runs the whole length of run, leaving the floor space free with the exception of nest-box space.

A broody pen is fitted at one corner and hinged to back and top, so that it may be easily put out of the way when not required.

FRONT.—Two frames 5ft. by 3ft., of 2in. by 1½in. wood, middle rail of 2in. by 1in. stuff, boarded 2ft. up with ¾in. matching. One frame 5ft. by 2ft., same stuff. Frames covered in front with 5ft. lengths of 1¼in. and 2in. by ¾in. stuff to form grooves for shutters. Wire

secured at back. One frame 8ft. by 1ft., with middle style of 2in. by 1½in. stuff, bolted to top of end frames.

Shutters, fitted in grooves, of 2in. by ¾in. stuff, with panels of glass kept in position by beading ¾in. square.

Flap, 8ft. 6in. by 1ft. 6in., of matching on battens of 2in. by 1in. stuff, hinged to roof frame.

Door hinged to one piece, and both 3ft. pieces hinged to front of end framing.

ENDS.—These are of ¾in. matching, nailed to framing of 2in. by 1in. stuff, total width 4ft. 10½in., height at back 4ft. 6in., in front 6ft. Opening in one end for nest-boxes 4ft. long, 10in. deep, and 6in. up. Outlet for fowls 14in. by 10in., and boxed-in shutter as shown.

BACK.—7ft. 10½in. by 4ft. 6in., ¾in. matching nailed on to two lengths of 2in. by 1in. stuff, bolted to ends as shown.

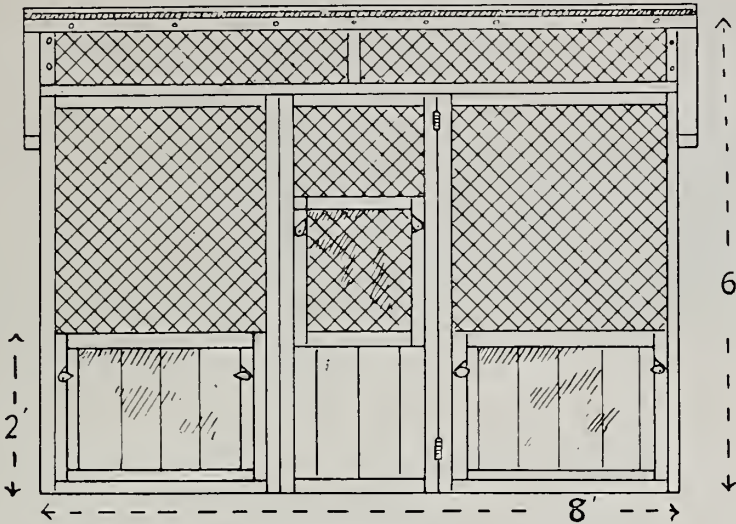
FLOOR.—7ft. 10½in. by 4ft. 9¾in., nailed on frame of 2in. by 1in. wood, with middle rail, ¾in. boarding projecting 1in. both ends, and at back over framing; floor screwed to lower framing of ends and back.

ROOF.—8ft. 6in. by 6ft., nailed to two rails of 2in. by 1in., and covered with felt; roof bolted on front and back.

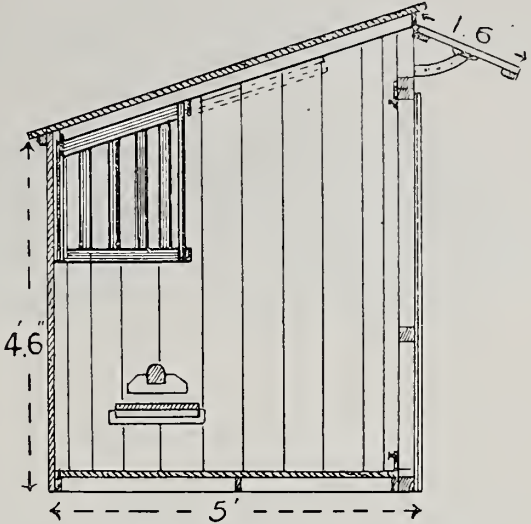
PERCH of 3in. by 3in. stuff rounded at top, and fitted into sockets of 1½in. stuff; dropping-board under of 11in. by 1in. stuff, battened at each end, and resting on battens of 2in. by 1in. stuff.

NEST-BOXES fitted one end and nailed to lengths of 2in. by 1in., covered with sloping board to prevent fowls roosting on top.

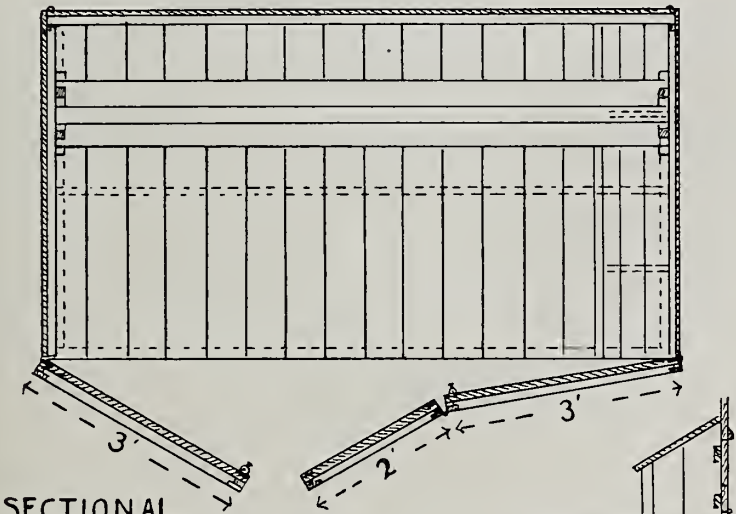
BROODY PEN, 3ft. long, 2ft. deep, and 2ft. 6in. high in front, made of 2in. by 1in. lengths nailed together. Front, 3ft. by 2ft. 6in., hinged on to roof; end, 2ft. wide and 2ft. 6in. high in front, hinged on to end of front; bottom, 3ft. by 2ft., hinged to back and attached to front and end with hook-and-eye catches. Bars in pen about 3in. apart.



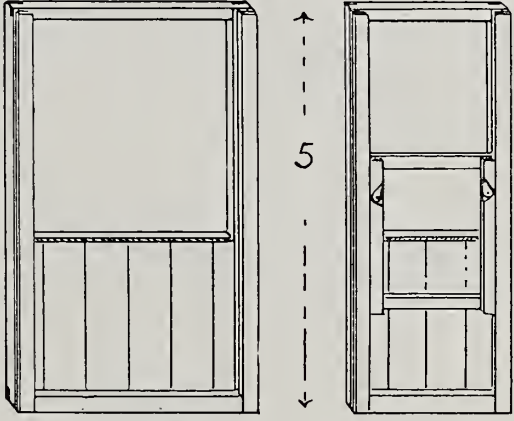
FRONT ELEVATION



END SECTION



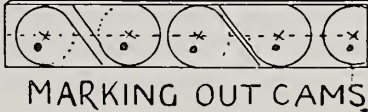
SECTIONAL
PLAN WITH FRONT OPEN



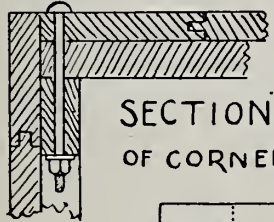
FRONT

DOOR

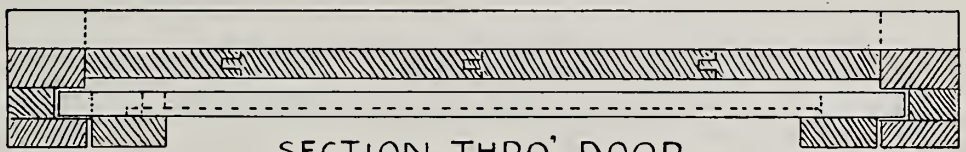
NEST
BOXES



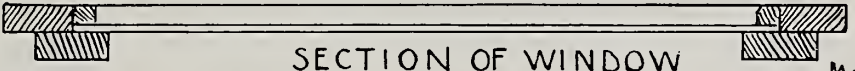
MARKING OUT CAMS



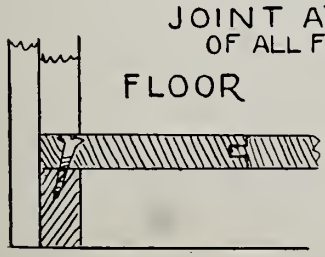
SECTION
OF CORNER



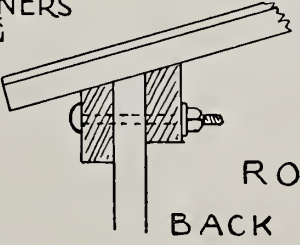
SECTION THRO' DOOR



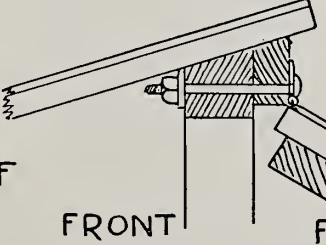
SECTION OF WINDOW



JOINT AT CORNERS
OF ALL FRAMING
FLOOR



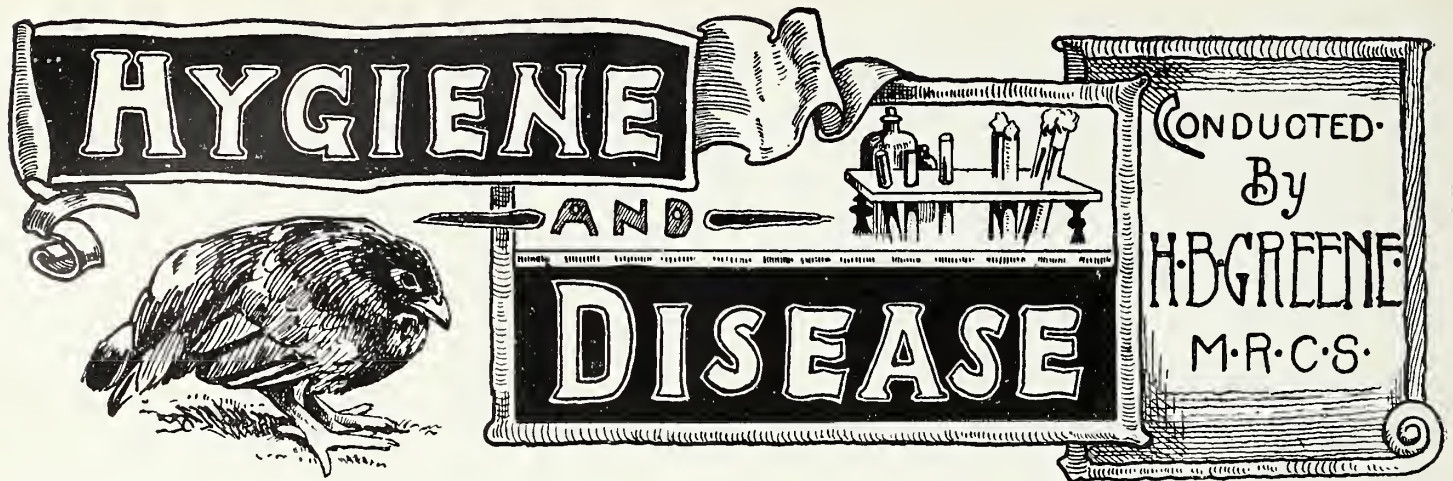
ROOF
BACK



FRONT



CAM
FLAP



POST-MORTEM EXAMINATIONS.

We have made arrangements by which post-mortem examinations of poultry and game can be effected for our readers upon the following conditions :

1. *The specimen is to be forwarded postage or carriage paid and securely packed to "Biologist," 297, Trinity-road, Wandsworth Common, London, S.W.*
2. *The fee of 2s. 6d. (stamps will not be accepted) must be remitted with each specimen and a letter giving particulars of feeding and housing, or any symptoms which were observed before death.*
3. *Birds should on no account be addressed to the office of the paper. If forwarded there they will be returned to the sender.*

It is recommended that specimens be dispatched by parcels post, where practicable, and as soon after death as possible. A reply will be received by letter, defining the disease, its cause, treatment, and prevention.

Looking Back.

Success in poultry-culture resolves itself largely into the question of maintaining the health of the stock. Health, again, in no small measure depends upon the weather. And weather—well, weather in the British Isles seems to be independent of everything, even of language. For surely there has never been a year in which the vocabulary of the polite poultryman has been more severely put to the test than that which has just closed. Certainly 1909 will for many years to come hold the record for untimely seasons, kaleidoscopic changes, and conditions generally unfavourable to the keeping and especially the rearing of poultry. That being so, we were not surprised to find a notable increase during the year in the number of those poultry diseases which follow exposure—in many cases unavoidable—to snow, rain, or cold winds. The heavy snowfalls caused many losses among the chicks in the early months, and hundreds perished from bronchitis, pleurisy, and pneumonia. Later broods got along fairly well until the heavy rains of May, June, and July well-nigh extinguished the ardour of the

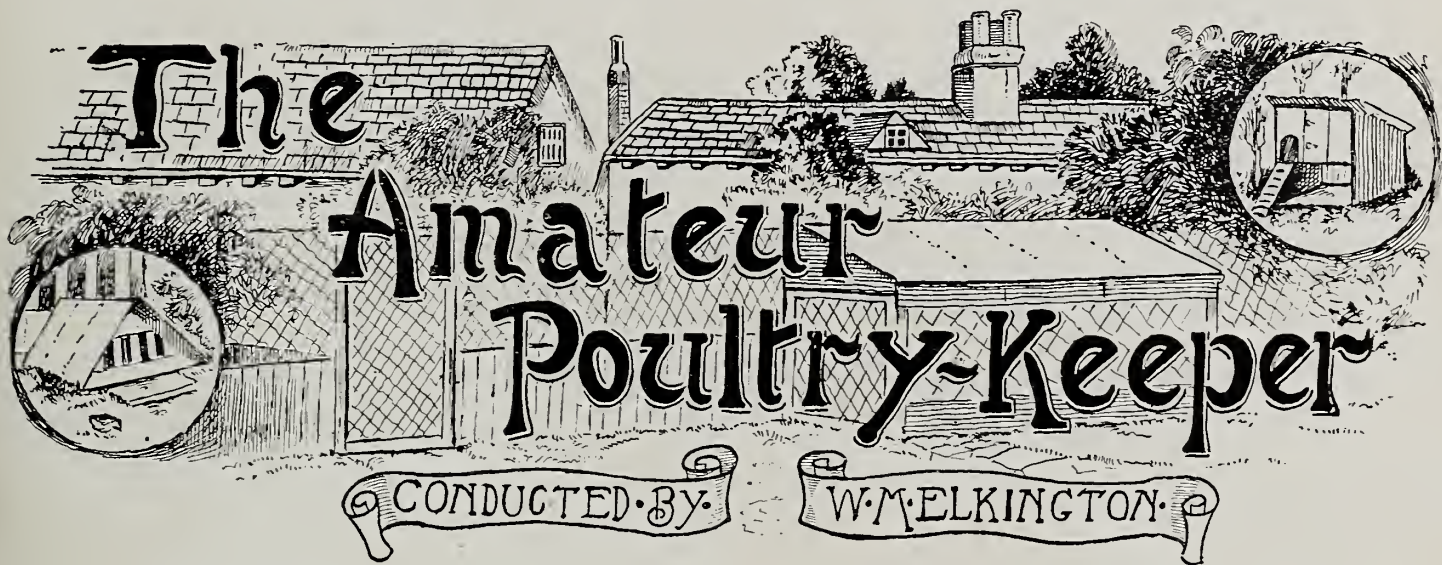
keenest fanciers. Even in August catarrhal roup and its fatal complication, pneumonia, were thinning the ranks of chickens and turkey poults alike, and it followed as a natural consequence of the wet autumn that pullets were backward and eggs scarce in November. Still, there are always compensatory factors to be discovered in a study of the results, and if poultry suffered in some respects from the abnormal summer, they were at least free from those ailments that arise under opposite conditions. Heat apoplexy was seldom experienced, and contagious diseases such as Klein's enteritis and tuberculosis were certainly not as prevalent this last year as in 1908. In reference to contagion, it may be that poultry-keepers have become more informed and alive to the urgent necessity of dealing with it promptly. The fact remains, however, that it has been less evident than in previous seasons.

Euonymus Poisoning.

In a paragraph concerning poisonous plants in the August number of the ILLUSTRATED POULTRY RECORD we reminded our readers that a flower garden may contain many plants and shrubs the leaves or berries of which, when consumed by fowls, act upon them with poisonous and often fatal effect. Birds that are well supplied with wholesome green food will, as a rule, turn aside from that which is poisonous, and there is no doubt that many of the noxious plants possess a flavour which is repulsive to the taste. But it often happens that, with the best intentions, the sweepings of a garden after the beds have been trimmed and the shrubs clipped are thrown to fowls in confined runs. The results may then be disastrous, and quite recently an instance was brought to our notice in which, through this practice, a number of fowls came to an untimely end. About twenty birds were kept in a suburban back-yard, under conditions necessitating a supply of green food and scratching material entirely from without. A load of garden sweepings, mostly made up of dead leaves, was obtained from an adjoining nursery, and the fowls turned loose on it. On the following day about a dozen birds were ailing in various degrees, and in the evening two of these died. On the second day of illness two more succumbed, to be followed by a fifth on the third day,

while the others recovered with difficulty. After the first two deaths the birds were fenced off from the rubbish heap. A post-mortem examination of the second victim disclosed no abnormal appearances, either in the crop, liver, lungs, heart, or spleen. The gizzard was found to be full of macerated leaf pulp of a vivid green, and the intestines showed signs of inflammation, situated as red patches at intervals, and contained a jelly-like exudation of the same bright green colour as the contents of the gizzard. The brain was considerably congested, as also were the kidneys. The contents of the gizzard suggested poison by some evergreen. This proved, on a close inspection of the load of leaf rubbish, to be the shrub *Euonymus*, for the heap included a quantity of clippings of this evergreen, while containing nothing else likely to have caused the trouble. There

are several varieties of the genus *Euonymus*, often to be found in the same garden, the difference being chiefly in the width and size of the leaf, and one (*Euonymus atropurpureus*), natural to America, provides a medicine used as a liver stimulant and powerful purgative. The symptoms presented by the sick fowls were : Diarrhœa (the excretions being watery and apple-green in colour), ruffled plumage, dulness, closed eyes, and inability to walk ; while in the worst cases, and those that were fatal, there seemed to be paralysis both of the legs and wings, drowsiness, and coma. We have been unable to find any previously recorded instance of poisoning of poultry by euonymus, although it has been met with in sheep. This example, therefore, is all the more interesting and worthy of note, since the shrub is of very common cultivation.



Covered Runs for Egg-Production.

Taking all things into consideration, I think it will be found that laying hens will not only give a better return, but will actually produce more profit when kept in good-sized covered runs than when running at liberty, although the latter plan is by a long way the more economical. But this season has taught us more effectually than any other within recent years that autumn and winter egg-production can only be carried on successfully in wet and cold seasons when there is plenty of covered accommodation. So far as the small amateur, who keeps a few laying hens in a back-yard pen, is concerned, a covered run must be regarded as an absolute necessity. In such cases the cost of putting a roof over the entire run would not be great, and it would be covered in a year or two by the greater number of eggs produced in winter, for it is unreasonable to expect hens to lay when they have to paddle about during the daytime on what is usually little better than a mud-bank. Such are the conditions frequently to be met with in many small poultry establishments, and especially those belonging to cottagers ; and it would really be a kindness to such

people if those who are interested in their welfare would point out to them the advantages of putting a roof over their poultry runs, and thus providing a dry surface upon which it is possible to keep the birds busy and warm by spreading loose litter upon it.

Extending the Principle.

But I think we may carry this principle still further, because the ever-rising value of new-laid eggs in winter justifies the necessary trouble and expenditure upon an elaborate series of covered runs. Mind, I am not referring to the style of combined house and scratching-shed that is featured by every appliance manufacturer at the present day. These are excellent in their way, but they are not large enough to keep a number of birds confined for any length of time. I refer to good-sized sheds, which in some cases may be constructed out of open-fronted barns or cart hovels, or in other cases have to be built in a similar style, in which a flock of hens will have ample room to move about without being continually huddled together, and in which they are likely to be perfectly happy, healthy, and contented. Already I

know more than one amateur who relies almost entirely on these large covered runs year in and year out, and they invariably reap the advantage in the winter. The initial cost may deter many from adopting this plan, and others may fear the additional expense of keeping hens under such conditions. But the fact remains that this is the best way to produce winter eggs.

Specialising.

Some amateurs are compelled by force of circumstances to confine their operations year after year, their only progress being in the nature of more skilful management. On the other hand, there are a great many who, whilst commencing in a very small way, and without experience, naturally desire to improve their position and add to the interest and profitable nature of their hobby. One such amateur wrote me a little time ago. He said he had been keeping poultry in a very amateurish style for two years, being content to produce enough eggs and chickens for the house and a few to give away to friends. But he had recently come to the conclusion that opportunities existed for developing the hobby, and, without desiring to take up such an intricate subject as breeding for exhibition, he thought something might be found that would stimulate his interest. I made inquiries and found this gentleman kept cross-breeds. They were supposed to be Indian Game-Buff Orpingtons, but were neither distinctive nor particularly useful, so that, as this amateur evidently desired to specialise in one particular branch, I advised him to take up some useful pure breed and make a speciality of egg-production. I gave him several choices, and he selected White Orpingtons, with the result that he has found an additional pleasure and, let us hope, profit as well in his hobby.

Combining Interest With Profit.

I have no doubt there are many more among my readers who will not be satisfied to remain novices all their lives and battle with the minor principles of poultry-keeping. When they have learned how to manage common stock they will want to go on to something better, and, apart from exhibition breeding, which possesses a fascination of its own, there is nothing more interesting than keeping birds of a handsome and useful pure breed and working to improve their productive qualities. Of course one must be an enthusiast, for the man who wants to save time and trouble will have no use for such things as trap-nests and egg-charts. It is in these things, however, that the enthusiast will find his chief interest. To be able to tell at a glance just what each of your hens has done lends a charm to poultry-keeping, and leads to better results at the same time. Moreover, this is a form of specialising that may be adopted either on a large or a small scale. The small poultry-keeper, with his ten or twelve laying hens, will get just as much pleasure and interest out of it as the extensive breeder, and it will lead him to better things by showing him how much can be done with common-sense management.

THE AMATEUR'S GUIDE FOR JANUARY.

NEW YEAR'S DAY is celebrated in many fanciers' yards by the advent of the first chickens. This is the earliest date on which a fancier may legally hatch chickens to be exhibited in young bird classes during the coming show season, although it does not follow that birds hatched a few days or even a few weeks earlier will not pass muster as chickens of the current year. It is impossible to tell the age within a few weeks, and so this matter has to be left, to a very large extent, to the honour of fanciers. As a rule none but fanciers trouble to hatch on New Year's Day, and they are chiefly professionals or extensive breeders. But many more people, and probably a fair proportion of amateurs, will be expecting their first chickens during this month, so that it is not too early to offer advice on rearing.

With regard to early chickens, hatched in what is usually the coldest month of the year, many people consider it impossible to rear out of doors, and put their chickens into greenhouses and heated or unheated buildings. This is all very well in its way. The chickens will be all the better for the shelter at the time, but one must remember that one cannot always keep them coddled up, and as we get cold and severe weather in this country right up to the end of March, and often in April, the trouble is that coddled chickens are apt to be very delicate.

Whether your coops have floors or not, it is desirable to have some loose litter. Either peat moss or chaff will answer the purpose, and it is not advisable to put too much into the coop at first, because some hens are prone to continual scratching, and the chickens may be buried until they are strong enough to get out of the way. With a good, quiet hen it is a good plan to use plenty of litter in the winter.

Early and late feeding are necessary at this time of the year. Do not wait for daylight to give the first feed, but go round with a lamp as soon as you get up. Again at night it is desirable to give two or three feeds by lamplight. During this month and the next the nights are so long that it is not safe to leave young chickens without food, but if you can give the last feed at 10 p.m. and the first again at 7 a.m. you will be overcoming one of the difficulties of winter rearing.

The relative merits of soft and dry food for chickens have often been discussed. Personally we are quite satisfied to compromise between the two, but at this time of the year it is not advisable to give very much soft food. The best plan is to make a custard with milk and eggs, for this is nourishing and will not cause scouring. If given twice or three times a day, the birds will not need to be given cold water to drink until they are some weeks old, and this is the best way to avoid bowel trouble. For the rest, give a good, clean mixture of small grains, and don't be afraid to spread a little among some litter, for even chickens benefit by scratching exercise in cold weather.



AMERICAN NOTES.

(BY OUR OWN CORRESPONDENT.)

Young Poultry-Keepers in Oregon.

The City of Portland, Oregon, has been buying annually about 3,000,000dols. worth of poultry products, according to a statement recently made to the Chamber of Commerce. In order to keep this money at home, it has been decided to organise poultry contests amongst the public school pupils, and over 130 boys have registered for the contest. These boys are between the ages of twelve and eighteen years, and under the rules they cannot have less than five nor more than fifty hens. The State College of Agriculture co-operates by issuing a reading course to all who enter, and a monthly visit is made to all the poultry-yards by the professors of the Agricultural College.

Literally hundreds of boys in the suburbs of Portland are taking up poultry-raising. The average price paid to the farmers of Oregon for eggs during the past year was 26 cents per dozen, and during last winter the price went as high as 75 cents. Prizes of 100dols., 50dols., and three of 5dols. each will be awarded to the boys securing the five highest number of points. These points will be given on the keeping of daily records, which include the number of eggs laid, condition of the fowls, cleanliness of the yards, the cost and manner of securing the feed, the amount of work put on the flock, and other features.

Preserved Eggs.

The constitutionality of the pure food law has been attacked by an action brought in the District of Columbia Supreme Court by a St. Louis, Mo., concern, which by a process of its own preserves eggs bought in one season to be sold in another. It seeks an injunction prohibiting the enforcement of a ruling by Secretary Wilson, of the Department of Agriculture,

against the use of boric acid, asserting that the pure food law is unconstitutional because it "assumes the police powers of States, and because it delegates to the Agricultural Department legislative functions." The St. Louis house in question buys its eggs in the spring and early summer, when they are cheapest, and after removing the contents of the shell preserves them indefinitely by the addition of a small quantity of the acid. The product is largely used by hotels, restaurants, and bakers in making cakes, pies, and puddings.

Public Hatching Stations.

Custom hatching stations are springing up all over the United States, and soon there will be few agricultural sections that have not one or more such plants. Where farmers and poultrymen have had a chance to give the idea a trial, they are only too glad to have an opportunity to have their eggs hatched for them, and are willing to pay a remunerative price for this. It saves them giving any attention to this important matter at a season when they are busiest with other farm work. The capacity of the hatching stations established varies from 6,000 to 60,000 eggs every three weeks, and not one of them is able to take care of all the eggs offered in the spring season.

In all these stations incubators of enormous capacity are used. The smallest size machine has a capacity of 6,000 eggs, and the sizes run up to 20,000. The larger the capacity the less is the comparative cost of running, as it takes practically no more coal to operate the larger machine than the smaller. About three bushels of coal is sufficient to furnish the heat for a single hatch. This makes it very much cheaper to operate than the smaller machines. The latter will require from 30dols. to 50dols. worth of coal oil to incubate 15,000 eggs, while these big machines will not require more than 2dols. worth of fuel. This, however, is not the main advantage of the large machine. Its simplicity of operation lessens the cost for labour by 50 to 75 per cent. All

that is necessary is five or six hours' time of the operator, daily, to turn the eggs.

One maker has built practically all the large machines in general use, but other incubator manufacturers are experimenting along this line, and in the near future will, no doubt, be competing actively for this class of trade.

Production in the Middle West.

The bulk of the poultry in the United States is to be found on the farms of the Mississippi Valley, and the West is now rivalling, if not surpassing, the Eastern States in poultry-production. Some idea of the growth of the poultry industry on the Western farms is shown in the case of the State of Kansas, where exclusive poultry-farms are practically unknown, yet the value of poultry and eggs has increased over 1,000,000dols. each year for the past five years. The Mississippi Valley has a soil and climate which are favourable to poultry culture even when the poultry is allowed to run on these farms half neglected.

A BELGIAN TABLE-POULTRY FARM.

HOW THE VISCOUNT DE BENGHEM REARS MALINES AT LIPPELOO.

By LOUIS VANDER-SNICKT.

FOR the last five years the Viscount de Benghem, at his Castle of Lippeloo, in East Flanders, about midway between Malines and Termonde, has conducted a large poultry establishment, which has special features of interest to all engaged in practical breeding of table-chickens. In this work he is assisted by M. Ernest Feyaerts, whose interest in the work and careful management have made the business a financial success. The object is the production of chickens for sale to fatteners, and the only breed kept is the Cuckoo de Malines, as that is here regarded as superior to all others for the production of the famous "Poulet de Bruxelles."

No breeding-stock whatever are kept at Lippeloo, but 600 pullets are placed out with farmers and small occupiers on the estate, in flocks of 10 to 30, with cocks as required. From these the farmers supply the eggs obtained at agreed prices, and in that way 60,000 eggs per annum are received. These are collected daily, and each egg is marked with a letter showing whence it came, so that in case of infertility or bad hatching the cause can be inquired into. They are kept in boxes until the machines are ready for them. Hatching goes on regularly for ten out of the twelve months, September and October being the resting period. During the last two years 20,000

birds have been reared at Lippeloo, and it speaks well for the management that the average mortality has never exceeded 10 per cent.

Artificial methods of hatching and rearing alone are employed. For the incubators two rooms are used in one of the permanent buildings in the outer courtyard. These are equable in temperature, being built of brick, lofty and well ventilated, and are by no means overcrowded. In each are eight incubators holding 250 eggs, so that the total capacity is 4,000, by which 2,000 chickens may be hatched every two weeks in the busy season. The average infertility has been about 25 per cent. this season, and the percentage of fertile eggs hatched is recorded at a little more than 70 per cent. The incubators employed are modelled on the "Prairie State," with modifications. Heat is obtained from a lamp at one end in the usual manner above which are tubes passing above the egg-chamber. Regulation is by means of a curved glass tube, in which are ether and alcohol, with a column of mercury, fixed upon a disc of wood pivoted in the centre. As the heat increases, the ether and alcohol expand and act on the mercury, which by its weight causes the disc to move, and is sufficient to raise a cap on the chimney, thus reducing the amount of heat passing into the tubes, and at the same time opens two shutters on top of the machine, so that the surplus heat in the upper chamber escapes. As soon as the temperature has fallen the reverse action takes place. The usual tray arrangement for moisture is provided. These regulators are sold separately in Belgium, and the machines are constructed at Lippeloo. As it is customary to start several machines at the same time, and the eggs are tested twice during the process, one is always free at the time



CHÂTEAU LIPPELOO.

[Copyright.]

of hatching, which one is used for drying off the chicks after hatching. Generally the birds come out on the twentieth day, and those hatched first are always the best.

In the garden behind to the left is a building which is used for rearing during the first month. This is 50 mètres (162½ft.) long by 4 mètres (13ft.) wide. In front



TABLE POULTRY REARING AT LIPPELOO, BELGIUM
 Rearing Yards. Older Chickens in the Woods. Interior of First Brooder-House. Winter Rearing-Yards. Interior of Second-Period Building. [Copyright.]

it is nearly 6ft. high, and rather more than 8ft. behind, facing the S.E., and glazed the higher part of the front. Hot-water pipes keep the atmosphere at an equable temperature, and the ventilation is excellent in every way, whilst the roof is double, with tiles above. This building is divided into fifteen compartments by wooden frames covered with wire netting. The Eleveuse (brooder) is of wood and round, about 5ft. in diameter, resting on a circular wooden floor. Inside is a circular metal water tank nearly six inches wide, leaving a wide space in the centre, and resting on iron feet, heated by a petrol lamp on the outside. The cover is of wood, with a large glass window in the centre. Ventilation is obtained by small openings all round the sides, and in the cover are other small chimneys, and when necessary the framed window can be left partly open. Two hundred and fifty chickens are placed in each of these brooders for the first week, after which they are reduced in number. The heat of the apparatus when they are placed therein is 29 centigrade (84.2F.), which is gradually reduced to 20 centigrade (68F.) by the time they are ready to dispense with heat altogether. Outside are yards or runs 65ft. long by 16¼ft. wide, planted with conifers and pear-trees as a protection against the sun in summer, and the ground, which is well drained, is disinfected and turned over every month before a new brood is introduced. Newly-hatched chicks are kept in the incubator until thoroughly dried, when they are removed to one of these brooders, and are not fed until they are thirty-five to forty hours old.

When a month old, the chickens are transferred to a second and larger house, on the other side of the rearing-ground, where they remain for a fortnight to a month, according to the season of the year. This is of the same type, but rather larger. It is warmed when necessary by pipes at the back, and the chicks sleep on the laths shown in one of the illustrations. Yards are provided on both sides, those on the N.W. for summer, and those on the S.E. for winter. At the end nearest the main building are food stores and the heating apparatus.

When the birds have grown enough to dispense with even semi-warmth they are transferred to the pine woods south of the Château, where are pens formed with wire netting enclosing 450 square mètres, in which 150 chickens are accommodated, thus allowing 30 square feet for each bird. Here they are kept until ready for selling to the fatteners. In each is a roomy house. The number of pens allows for one remaining empty during the busy season, when it is ploughed and planted, so that each run receives this rest once at least during the year. Here they have plenty of space and of shade, and they grow rapidly.

The method of feeding adopted is as follows: First feed, a mixture of one-third milk and two-thirds water, and a hour afterwards stale wheat-bread crumbs. During the first three weeks they are supplied five times per diem with five-thirds of buckwheat meal made into a paste with buttermilk or *petit lait* (skim milk).

Then they are supplied twice a day with millet, which is continued for a fortnight, when wheat is substituted for it, which is continued until they are ready for sale at thirteen weeks old. All the time green food is supplied abundantly, such as green cabbage and lettuce in summer, cauliflowers and Brussels sprouts in winter. The results of this treatment have proved most satisfactory, as the birds grow rapidly and are well fleshed.

Here are some general principles followed:

Never to permit the entry of a strange fowl;

Every attendant is compelled to change his shoes before entering or leaving the rearing grounds;

No stranger, especially a dealer, is allowed to go among the birds;

Not to put two broods in succession on the same ground before house and ground are disinfected, and to ensure perfect cleanliness of all the appliances;

Every particle of food left is removed after each meal;

The grounds are carefully swept every day. The manure is worth ten times as much as that from an ordinary farm dunghill;

To watch carefully the fowls so as to vary the food if necessary;

To remove at once every chicken showing signs of sickness.

As 1,150 pints of milk are required every day during the busy season for feeding the birds, a creamery is attached to the farm. Other substances have been tried, but nothing else gives the whiteness of meat desired.

The Order of Leopold.

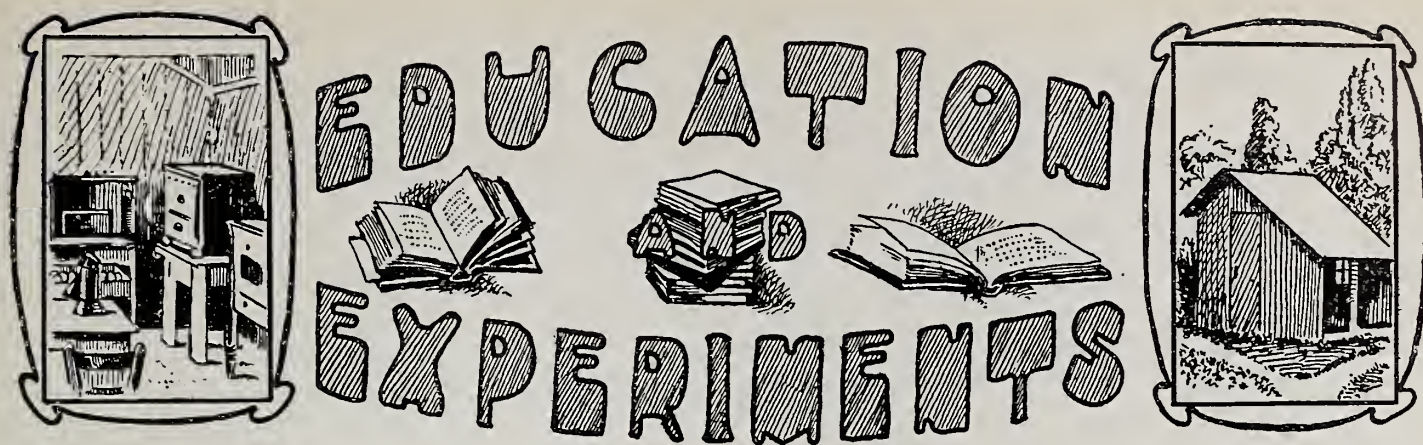
The late King of the Belgians conferred the Order of Leopold upon two well-known poultry-breeders—namely, M. Charles Couvreur, who is Vice-President of the French Poultry Society; and Herr Auguste Wildhagen, of Kitzingen-Sur-Mein, who is Secretary of the Poultry Committee of the German Agricultural Society. Both have rendered great service to poultry-breeding on the Continent generally and in their own countries specially.

Cock-Crowing Matches in Syria.

The sport of cock-crowing is very popular in Belgium, but it is also known in Asia. We recently learnt that it is followed with great avidity in Syria and Asia Minor. In the Smyrna district is a breed called Denizeli, which is largely kept for this purpose.

The Poultry Industry in Belgium.

Mr. Edward Brown, F.L.S., hon. secretary of the National Poultry Organisation Society, has completed his tour of observation in Belgium, during which he has visited nearly all sections of that country. His report, which will be on similar lines to those on America and Denmark and Sweden, will be published as soon as ready, probably in March. It will be illustrated by photographs taken by the author.



POULTRY INSTRUCTION BY POST.

CORRESPONDENCE CLASSES serve a useful purpose in some branches of instruction, but in Europe not much use has hitherto been made of the system for teaching poultry-keeping. In America more is done in that way both by colleges and individuals. Some time ago an attempt was made to introduce the system into England by an American, we believe, but the enterprise did not succeed. Fees were high and results doubtful. Such a method is largely theoretical, and poultry-breeding and keeping is essentially practical. The need for theory and practice running side by side, the former to explain the latter and the latter to illustrate the former, is evident to all. Neither can be dispensed with. We do not say that a scheme could not be devised by which Correspondence Courses might be made of value, but the prime necessity is that every student shall week by week carry out in actual operation the lessons received. Probably it is here that we can find an explanation why such courses have attained a greater measure of popularity in America, for there those taking them are largely farmers, who know something of the subject and who can put to an immediate use the instruction received; whereas on this side comparatively few of those who have sought for training belong to that section of the community. The townsman desiring to take up a country life has not either the basal knowledge of the subject or the opportunity at home of testing by actual experience the theories propounded to him. He must therefore go where the mental and practical training can be secured *pari passu*, otherwise he will be merely theory-crammed.

These remarks are suggested by our receiving from the Oregon Agricultural College Bulletin No. 1, forming Reading Course, Lesson 1, written by Professor James Dryden. In the explanatory sheet which accompanies the bulletin it is stated that "the first lesson in the Reading Course in Poultry Husbandry is sent to all those whose names have been furnished to the Agricultural College by the Portland Y.M.C.A." No charge is made for the course, and that is where American colleges and those who come within their range of influence have so great an advantage, as the State and Federal grants cover the expenses of these institutions. All that is

asked from students is that those who begin the study will pursue it diligently to its completion. With each lesson a set of questions are sent, and at the end a written examination is to take place. That those who take it up can gain much benefit is unquestionable, such as apply the instruction most of all. And the enthusiasm for education, which is so striking a characteristic of Americans, means much in the attainment of success.

The Bulletin referred to deals with "Breeds of Chickens," and is essentially practical. Some of the recommendations would not apply in Europe. For instance, in utility classification of races, under the "meat breeds," it is stated that "Brahmas, Cochins, and Langshans are the principal meat breeds." No one of these would rank higher than third grade with us, and the Cochin would not come in at all. The general purpose breeds named are Plymouth Rocks, Wyandottes, and Rhode Island Reds, any of which are better for meat, in our judgment, than Cochins or Langshans. Each country, however, has the right to its own ideas. Evidently Buff Orpingtons, White Orpingtons, and Faverolles, to say nothing of Dorkings, are not common in the Pacific Slope. Apart from that, the advice given is excellent. One section we quote as applicable everywhere:

Does it pay to keep pure breeds? Generally speaking, it does. One advantage of the pure breeds is that the offspring are more uniform in size and shape. Uniformity of product, whether of eggs or dressed chickens, has a market value. The barnyard fowl with a mixed ancestry will usually produce chickens of different sizes, different shapes, different colour of skin and legs, and varying in quality of flesh. In one such flock one may have the size and characteristics of the egg breeds, another of the meat breeds, &c. The colour and size of the egg will also vary. The main advantage of the pure breeds is that you get a more uniform product from them than from the mixed fowls.

GEFLÜGELHOF HUBERTUS.

FOR the fifth year in succession Herr P. Sweers, of Huls, by Crefeld, has made public the results of his season's work in experimental poultry-keeping, and we are glad to be able to report from the details given in the *Jahresbericht* for the year ending September 30,

1909, that success is attending his efforts. It may be remembered that we made reference to this farm in our issue for December, 1908, when we entered into particulars relative to his aims and successes. During the year under review the same question has been puzzling Herr Sweers—namely, the cause for the large number of chickens which die in the shell—and he has seriously set himself to find, not only the reason for this, but also a means of prevention. At the same time—and as an outcome, perhaps, of the other—another problem is to be solved, dealing with the mortality amongst chickens during the earlier stages of their growth. This opens up a very large field for investigation, for in respect to the last-mentioned difficulty many

MORTALITY IN CHICKENS.

MANY poultry-keepers have been puzzled as to why chickens reared under hens should thrive and live whilst a considerable percentage of those in brooders die, although everything else is equal. Various causes have been suggested, but Mr. C. G. Golding makes a most suggestive contribution to the *Canadian Poultry Review*, which is well worth more careful study. If floorless brooders will solve the problem the matter will be easy on a small scale, but we shall have to modify our arrangements for larger operations.

In my work of fattening birds for market in the fall I use crushed oats, from which I remove the hulls with the fanning mill. Some of the hulls are saved to be



LAYING-HOUSES ON THE "GEFLÜGELHOF HUBERTUS."

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points have to be considered. There is the question of brooding and feeding the youngsters, of the means and possible faults in incubation, the quality of the eggs set; this, it is thought, depending on the feeding of the stock birds. As usual a balance-sheet is appended to the report, and this year's figures must assuredly be very encouraging to the owner. The total expenditure throughout the year amounted to 9,300 marks (£465), and the receipts were 12,300 marks (£615), showing a profit of 3,000 marks (£150), or, roughly speaking, 32 per cent. interest. The dissemination of this yearly report can but be of very great assistance to all German utility poultry-keepers, and Herr Sweers deserves every credit for the good work he has undertaken and carried out so faithfully. We reproduce a picture of one corner of his yards, and only lack of space prevents us portraying other sections of the farm.

used for bedding in the brooders the next spring, and by the time the later hatches arrive the moisture from the atmosphere has caused the presence of mould in the hulls. Last season I lost so many chicks in this way that I discontinued the use of the chaff for bedding, although I didn't connect the bedding with the trouble. I simply argued that when the hen brought off a batch of chicks we don't clean up and disinfect a brooder, and strew chaff on a clean board floor—at least, I don't; we simply place a coop on a clean piece of ground and find the chicks come along all right. Now, chicks from the same batch placed under the hen came on all right, and others placed in the brooder died, cause unknown. So finally I fixed up a brooder in a different way. When the hatch was coming off, and I was preparing a brooder for their reception, I selected a spot where the grass was thick and short, and with a spade I cut off a very thin slice of sod. I covered the entire floor of the brooder with this sod, and used no other bedding whatever, and I had no more losses among the chicks raised in that brooder than among those under the hen.

THE POULTRY-KEEPER'S OTHER INTERESTS.

By "HOME COUNTIES."

*Author of "The Townsman's Farm," "Poultry Farming: Some Facts and Some Conclusions,"
"The Case for the Goat," "Country Cottages," &c."*

"Poultry should be only one part of the stock."

—*The Secretary of the N.P.O.S. in the "Cyclopædia of Modern Agriculture."*

THE POULTRY-KEEPER'S COTTAGE.

I want to give a notion of the cost of different sorts of cottages, and to show how money can be saved. If any reader has any particular problem before him in the way of planning a cottage or estimating the cost, he might communicate with me, and I will endeavour to meet his difficulties; but he should write as soon as the RECORD is out, as there is not much time to spare between successive numbers.

COST OF A SMALLER BUILDING.

Meantime let me give an idea of the ordinary cost of building in a smaller way than for a cottage. I am writing these notes in a new study to which I have treated myself. It is twenty-four feet by twelve feet, and high enough for me to touch the ceiling on tip-toe. It is built of stud and plaster, and covered with hand-made Sussex tiles laid solid in mortar—much the best, but by no means the ordinary way of laying them. There are four groups of three little windows high up, and at my garden end four folding doors with ten panes in each. The ceiling—boards—is nailed above instead of below the rafters, which show, and, like the walls, is white Duresco. There are twelve by two feet cupboard; brick footings; stove (the never-go-out-sort) provided by me, but pipes and fittings are in the contract. The space between the ceiling and roof is utilised as an apple cupboard, and there is a small entrance door to this attic from the outside. Total cost, for the very best work, and including a little passage connecting to house, but not including architect, £79.

LOST ROOF SPACE.

I note that for a very little more I could have had, by raising my roof a little, a decent room instead of a cramped attic, but I did not want to shut off the view from the side of my house on which my study stands. Many people, in building in a more favourable position than I did, certainly forget to get an adequate attic, and so they have a cavern below a roof instead of, for a few pounds more, a decent room. Obviously, roof space cannot be utilised in districts where there are by-laws, but many districts in which poultry-keepers settle have no by-laws. Roof space may be cold in winter and hot in summer, but a good deal may be done to prevent this by means of bedding the tiles well in mortar and then boarding up inside the rafters to keep out the cold, and louvres will provide ventilation. The air space between roof and the boards on the rafters should be a buffer between both cold and heat. It may be of interest to add that the price for the job I have quoted was given in competition, but that I did not accept the lowest tender. I thought it was not economical to do so, and I am sure of it now.

ILL-USED FRUIT-TREES.

The things that make the worst show on a poultry-keeper's place are often the fruit-trees. They are sometimes a job lot, and no one in his senses should buy fruit-trees at a sale. They are badly planted, either too deep or not firmly enough. They are often in grass, which is poison. They are not staked, and consequently are all shapes, and the fine roots that seem to help the fruiting are torn. (If they are staked, it is often with no hayband, or not tightly enough, and they are injuring themselves.) Finally, they are unpruned or badly pruned, and seldom, if ever, sprayed. Perhaps I ought to add that they are sometimes not wisely chosen as to varieties.

CONSIDERED AS SHELTER.

Now, at this time of day there is small excuse for such mismanagement. Let us hope that some poultry-keepers who are making a start on trees this winter will go to work on wiser lines. It is little use planting trees unless they are properly handled at planting time and afterwards. They will only be a reproach. There will never be any decent fruit. Even as shelter for fowls a few spruce would have been more serviceable, for spruce does remain green during the winter when fruit-trees lose their leaves.

ASKING FOR ADVICE AND TAKING IT.

In buying trees it is good advice to patronise a good local nurseryman. You are likelier to get trees which will succeed on your soil and in your climatic conditions. Certain varieties may be first-rate, but they are no good to you if they will not do well on your ground. In the way of further counsel, perhaps as important as anything is to be clear on the use to which you mean to put your trees. If they are to supply the house, for eating raw, for cooking, for jam, and for sterilising, and you have no other trees, you want something like a succession ranging from, say, Mr. Gladstone for the end of July or August, to Lane's Prince Albert and Cox's Orange for as long as your fruit-room will allow them to keep. If you want to sell, you want a lot of one sort to send to market, so you will do well to concentrate on a few, it may be on only two, it may be on only one variety. Tell your circumstances to an honest nurseryman, and he will probably advise you for the best. Remember that you know as little about fruit-trees as he knows about poultry, and be guided by the expert.

PLANTING TIME.

When the trees come, do plant them so as to give the uprooted things a chance. Don't worry if they come in frost. They'll wait all right, left in their package in some outhouse. On planting day plant so that the trees are not deeper in the ground than their collar-mark shows them to have been. Get the soil over the junction

with the stock and you court disaster. And do make sure of planting firmly and giving each tree a stake at once, if it is a standard or half standard. If you must plant in grass, plant in plots not less than 5ft. or 6 ft. square and very thoroughly double dug. As to firm planting, think of how the farmer rolls his seed-bed. If a little grain like wheat wants a firm seed-bed, surely a tree torn up out of the ground wants to be put firmly into the earth when replanted.

THE COST.

The first cost of trees is small compared with the cost of proper attention afterwards, pruning (which do learn to do properly or depute to an expert), mulching, cleaning of ground, spraying, grease-banding, &c. You can get the best standards grown at 24s. a dozen, or £7 10s. per 100, with 5 per cent. off for cash, and for market work cheaper still. Pyramids, or half standards, are priced at 18s. If you start with dwarf maidens, you spend only 12s. per dozen, or £4 per 100; but you must let a market gardener prune these for you, or they will never do well. Needless to say, the quickest yield comes from the pyramids and bushes, but they are not suitable for spots where poultry have access, for the birds spoil the fruit by pecking it. If bushes are wanted, and the fowls must run where they are, nut bushes may be planted. They are priced for purchase in the ordinary way at between 9s. and 12s. per dozen. Consult an expert as to varieties.

A PLEA FOR FOREST TREES.

With regard to trees as shelter, far and away the cheapest are, of course, forest trees. But there is no compensatory fruit. The price of fir and spruce, and of all forest trees, depends on the number of times they have been transplanted and the height. It is the greatest mistake to go in for large trees. Small trees will always overtake large trees, and they are much likelier to live. The price is negligible. Think of being able to get, in the ordinary way, 9in. to 12in. once-transplanted Norway spruce at from 22s. 6d. to 25s. per 1,000, and 12in. to 15in. twice-transplanted at from 25s. to 27s. 6d. From 15in. to 18in. runs from 32s. 6d. to 37s. 6d., and from 18in. to 24in. from 50s. to 60s. Scots fir, from 6in. to 9in., one year transplanted, is 15s. per 1,000; 9in. to 12in., 17s. 6d. to 20s.; and 12in. to 15in., 20s. to 22s. 6d. At such prices who need be without shelter belts?

HOW CARE IS REPAYED.

Though the little trees can be ploughed in or slipped in below the notched sod, a lot will die so treated, and the growth will be slow and irregular. Planted firmly in dug ground, they will do very differently. After the first year, these will put on from 6in. to 1ft. a year. And, of course, they are green all the year, and a very great pleasure to look at. As a shelter they are, of course, superb, for one can afford to plant them 4ft. apart. That is, in fact, quite a forester's distance. Close planting leads to straight up and down trunks. And later on superfluous trees can be thinned out. The right

thing to do is to mix the deciduous larch with spruce and fir. They are equally cheap, and at cutting age are, of course, extremely serviceable. Although I have mentioned only three sorts of forest trees, all are cheap, from oaks downwards. Indeed, a forest tree nursery catalogue is a revelation to many people. Of course trees can be got by the hundred as well as by the thousand. They are then, however, a little dearer, but even at that price the figure is low. Among quick-growing sorts there is nothing to beat poplar and willow.

BEAUTIFUL HEDGES.

As to hedges, holly is about 15s. per 100 for 6in. to 9in. stuff. But holly grows up slowly. Privet is only from 25s. to 30s. per 1,000 for 1½ft. to 2ft. transplanted stuff. The same size of thorn or quick is 20s. to 25s. Myrobalan plum is only 25s. for 1½ft. to 2ft. transplanted stuff. The man who wants to make his hedges beautiful as well as useful can get sweetbriar 1ft. to 1½ft. transplanted at 12s. 6d. per 100, and honeysuckle at from 15s. to 25s. Broom, wild cherry, and furze are also sold at reasonable prices. People troubled with rabbits should think of rhododendron (50s. to 60s. per 100) or *Rosa rugosa*, which the rodents practically leave alone. In planting a hedge reckon, say, 12in. to 15in. for 1ft. to 1½ft. holly, and 6in. for 2ft. to 3ft. privet (35s. to 40s. per 1,000, or 5s. per 100). But there is a good Board of Agriculture gratis leaflet on hedge planting. If clumps of broom or gorse are wanted they can be sown as seed.

REVIEW.

PHEASANTS : Their Natural History and Practical Management. By W. B. Tegetmeier. Illustrated from life by J. G. Millais, T. W. Wood, P. Smit, and F. W. Frohawk. Fourth Edition; Enlarged. Horace Cox.

THE increasing number of breeders of pheasants will welcome the new and enlarged edition of Mr. Tegetmeier's standard work on this subject. When the book was first published it at once secured a favourable reception, thanks to the ornithological knowledge and the practical experience in the management of pheasants possessed by its author. It is hardly necessary to remind our readers that it deals with every known breed of pheasants in existence; that it embodies the result of many years' research and personal experiment; that as a history of the pheasant it has no rival in this language; and that it is written in so easy and attractive a style that many a layman who only knows the pheasant as a very edible ornament of the dinner-table finds pleasure and profit in its perusal. The half-dozen colour plates from the work of Mr. Frohawk are one of its principal embellishments, but the high quality of the illustrations throughout is such that one hesitates to dwell on one artistic contributor more than another. As a blend of pure nature study, avicultural science, and art, it will be likely to retain its high place in this class of literature for a long time to come.

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BIBLIOGRAPHY OF POULTRY.

COMPILED BY EDWARD BROWN, F.L.S.

Compiler's Note.—With the object of securing as complete a list as possible of Poultry Books, it is proposed to give from time to time particulars as to such as are known. My own library embraces nearly 350 volumes on this subject, but there must be many not contained therein. I beg respectfully to request the kindly co-operation of owners of books not named, with a view to making the list exhaustive. In sending particulars I request that the following be stated: (1) Full title, and sub-title, if any; (2) Author's complete name, with any information respecting the writer; (3) Place of publication and name of publisher; (4) Date of publication, if given; (5) Number of edition; (6) Number of pages and size of book; (7) If illustrated; and (8) Whether in paper or cloth. Acknowledgment will be made of source of information. The books marked with an asterisk I have not been able to verify, and fuller details will be welcome both as to books and authors.

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(To be continued.)



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A LEICESTERSHIRE POULTRY-FARM.

IT has often been observed that a large proportion of the successful poultry-breeders in this country are men who have derived their training from elsewhere. Mr. George Dent, of the Stock Farm, Great Glen, Leicestershire, is one of these. He spent nineteen years of his life in Ontario, gaining experience in general farming, and when he returned to England three years ago to take over the management of the 200-acre holding that had been his father's before him, it was with a mind well ripened by his Canadian experiences. The Stock Farm is situated about six miles south of Leicester, in the very heart of the hunting district. It consists entirely of pasture, and has for long been identified with the breeding of pedigree cattle and a considerable export trade in horses; at the present time there are something like a hundred head of breeding cattle upon it. As a poultry-farm, it may be said to have begun its career only when Mr. George Dent took over the management and started operations with a

comparatively small stock, which he gradually increased. To-day there are about 2,000 birds of various breeds upon the establishment, and, taking into consideration the extent of ground at disposal, a very considerable growth in numbers may be expected in the near future.

Although a good many breeds are represented at the farm, there are two that preponderate over the rest, and in these Mr. Dent may rightly claim to have specialised with unusual success. These are the Sussex and the American White Wyandotte. Of the Sussex, indeed, he has made so exhaustive a study, and places so high a value upon the breed's admittedly fine all-round qualities, that it was in our mind to head this article "A Breeder of Sussex." But as this might have given a false impression of the importance of the American Wyandotte at the Stock Farm—and its importance is a close second to that of the Sussex—and of the general character of the stock, we refrained from so exclusive a label. At the same time, it is the

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Sussex varieties that are Mr. Dent's principal concern—at any rate, for the moment. He keeps the Light, the Red, the Speckled, and the Black-breasted Red, sometimes called the Brown. He is an enthusiastic advocate of their properties as a general purpose fowl, his ex-

birds of his flock for this purpose, and sometimes purchasing a few from other farms for fattening. In this connection it may be noted that the Sussex, among its other recommendations, lends itself peculiarly to fattening, in that, differently from many other breeds, the age



BREEDING-PENS ON THE STOCK FARM.

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perience having shown him that in addition to their table qualities their egg-yield under fair conditions is as good as one could wish for in regard to both quality and size, that they are essentially hardy, that broodiness is uncommon among them, and that both for exhibition and utility purposes they rank among the most economical. The American White Wyandotte is, in his opinion, superior to the English breed because the American type is purer, because its smaller size makes for greater stamina, and greater stamina means greater and more consistent egg-production.

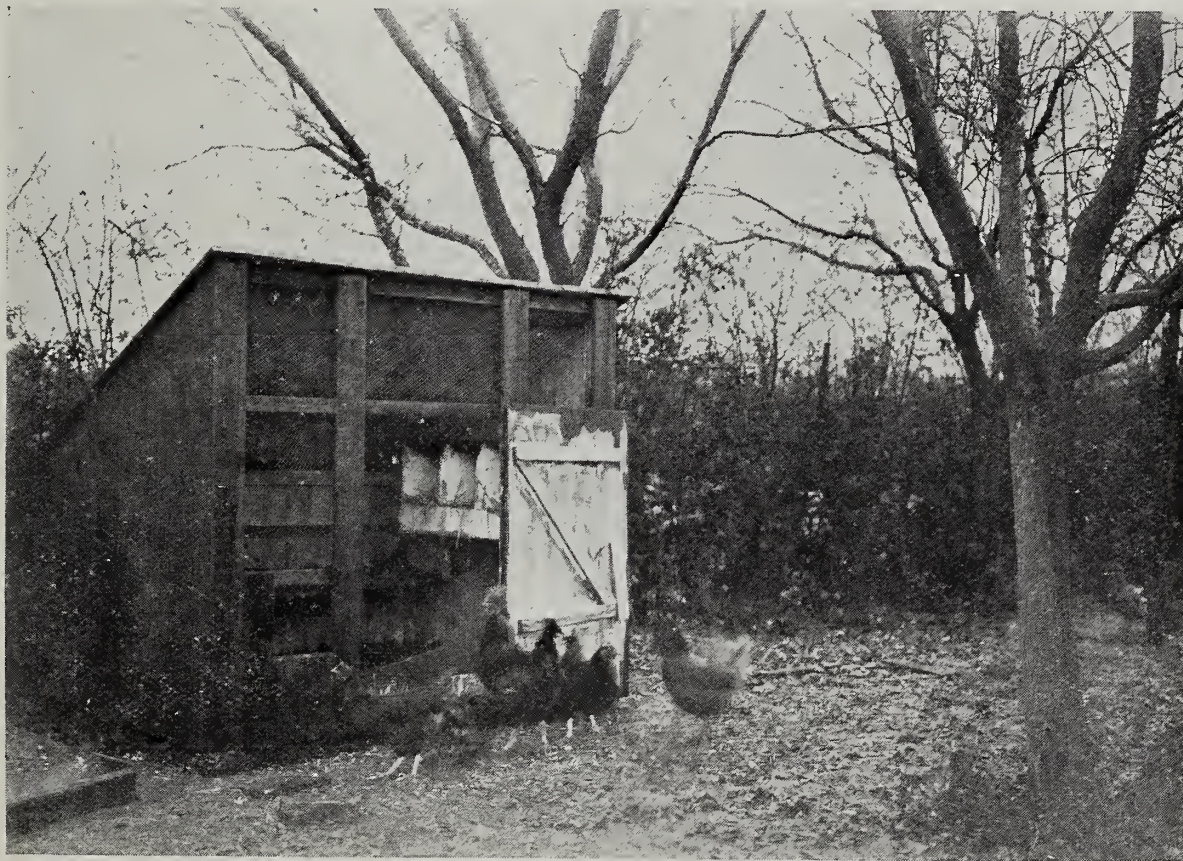
And now a word or two as to the plant and its management. At the time of our visit there were about twenty pens mated up, in two ranges of ten apiece. One of these ranges, close to the farm buildings, is well planted with fruit-trees, giving ample shade; and another feature is a line of fattening-coops at its near end, for Mr. Dent is his own fatterer, reserving the otherwise useless

of the birds does not matter. The pens are fitted with houses and scratching-sheds, simply constructed on the Canadian principle with open wire-netted fronts. Each scratching-shed is provided with an ample litter of chaff and leaves. Exhibition and utility stock are kept apart from each other; and so here we found three pens devoted to the selected Sussex varieties, while the remaining seven were filled by purely utility birds. However, the feature of the farm that impressed itself most strongly upon us is the extent of the colony house system. Several large fields are studded with these colony houses, which are built in accordance with a simple though efficient plan, most of them having the corners supported by bricks, though the portable house on wheels is not absent. The nature of the soil, which is clay, renders a raised floor advisable. Near almost every house or group of houses is a dog-kennel containing an English bobtail, whose duty is the protection of the birds against

marauders. We should hesitate to say how many of these canine policemen there were distributed over the farm, but the force seemed to us to be fully adequate. Their presence is certainly not unnecessary. Adjoining a part of Mr. Dent's boundary is an extensive and famous fox covert! At this distance also from the farmhouse a human robber might feel himself safe from interference with his nefarious designs were it not for the wakeful defender of the fowl-houses, who, by the way, has enough length of rope to make himself extremely unpleasant to an invader. This police system appears to work admirably, and Mr. Dent suffers but little either from foxes or tramps.

Stretching away from the back of the farmstead, a long, straight belt of woodland, though just on the other side of Mr. Dent's boundary, is available for his birds, but not for the erection of houses. A fine orchard near his house gives additional accommodation for birds at liberty and a change from the monotony of the open pastures.

the elementary laws of poultry-housing, and—says Mr. Dent, in effect—the Sussex will do the rest. The Sussex, moreover, will do it on less food than any other breed he knows, and the Sussex thrives under a system which, while heedful of comfort, bars “coddling” as the plague itself. From the economies of the Sussex we may turn for a moment to those of the farm in general. Practically the whole of the appliances are home-made, and not only this, but made out of such homely materials as packing-cases, sugar-boxes, and so forth: it was not for nothing that Mr. Dent served an apprenticeship in the Canadian wilds. Then it would appear to the ordinary observer that a large staff was necessary for the running of this very considerable poultry plant. As a matter of fact, Mr. Dent manages with a comparatively small one, though he does not stint labour where it is absolutely required; in the fattening season, for instance, an expert crammer from Sussex is regularly engaged. On an establishment where



A HOME-MADE SCRATCHING-SHED.

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Change of ground, change as frequent and as drastic as possible, is, as indeed it should be, Mr. Dent's guiding principle. Keep the ground absolutely sweet, feed judiciously and with an eye to the particular purpose in view, observe

birds are encouraged so much to forage for themselves, the regular commissariat is of less importance than it would be in other circumstances, but we may mention that the usual dry foods are wheat, oats, and in winter a little

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maize. A hot mash of bean-meal or biscuit-meal is fed to layers, and Sussex ground oats are used for fattening.

We were reminded once more of Mr. Dent's preference for the home-made article by a very well-built brooder-house in one of the outlying fields. The brooders inside this house, and also one or two outside brooders we saw on other parts of the farm, are all of his design and manufacture—not things of beauty, perhaps, in regard to surface finish and so forth, but eminently common-sensible. Trap-nests he has no use for. This, at first, might seem a surprising circumstance in view of the fact that he breeds so largely for egg-production, but it must not be forgotten that the individual performances of a layer are not of real moment to him; it is the aggregate production of a carefully-selected pen that chiefly concerns him. He uses seven incubators—possibly the only appliances in his possession that he did not make himself. It is just this reliance on himself in matters which would seem to call for outside aid, that distinguishes him from the rank and file of poultry-keepers and gives an individual note to the character of the Stock Farm. Economically, of course, it is of the utmost importance; the reduction in outlay secured by making one's own houses, and making them out of free material—for the wood, as we have indicated, is what would otherwise be used as fuel—can hardly be over-estimated. Moreover, from other

points of view, such as those of the visitor or pupil, the plant is a veritable object-lesson in what can be done with a modest expenditure; an education such as one rarely meets with, in the art of economising in equipment and food.

Three years is not a long time in which to make a big splash in the poultry world—even three years of such hard work and careful experimenting as Mr. Dent has put into the business. As a matter of fact, he has hardly tried to make a splash as yet, but has wisely busied himself with the foundations of a sound and ambitious enterprise. Thus, while building up a large egg trade, he has left laying competitions alone; and while he has long had some first-class exhibition quality among his Sussex and American White Wyandottes, he is a newcomer at the shows. Even so, one recent trial is noteworthy, both in itself and as an indication of what the Fancy may have to reckon with in a not distant future. Mr. Dent sent two Speckled Sussex to the recent Birmingham event, and his hen took second place, beating a bird that had come crowned with the laurels of a first and special from the Crystal Palace. This, in itself, was a remarkable achievement, after making all allowances for the varying tastes of judges. But it becomes more remarkable still when one mentions the fact that this was the first time Mr. Dent had shown.



AMERICAN WHITE WYANDOTTES. ONE OF MR. DENT'S SPECIALITIES.

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100,000 FEET OF LUMBER.

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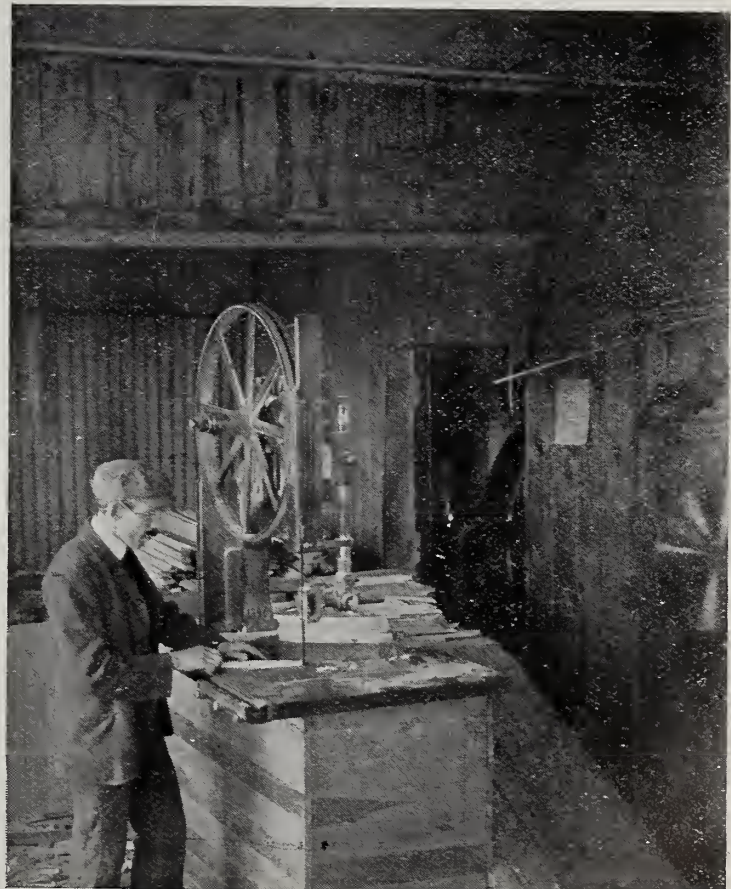
THE INCUBATOR COMPONENTS COMPANY.

SITUATE just within the city limits of the Cathedral town of Gloucester and within a few minutes' walk of the Bristol Road terminus of the electric car line is the factory belonging to Mr. Godfrey, who is the owner of the Incubator Components Company and the maker of the Gloucester Incubator. Gloucester itself is noted for the large proportions of its timber trade, hence it is a most suitable town for those manufacturers who fashion appliances from wood, and it is for this reason that the locality was selected; moreover, it is a first-class railway centre, being served by two of the largest lines in the country, and, although the works are a considerable distance from the business portion of the city, being within the town limits, goods are collected free by the railway companies.

THE FACTORY.

The works themselves consist of a number of long buildings, some thirty feet in width, and, although timber built, they are well constructed and all are artificially heated during the cold weather. Mr. Godfrey, the proprietor of the company, evidently applies science in his regard for the comfort of his workpeople, for he realises that if they have to pass the working hours surrounded by cold atmosphere, a considerable portion of their energy must be utilised for the

maintenance of the body heat—this is reserved, owing to the heated shops, and used in the making of his goods. On our arrival, after



A BAND-SAW

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✧
CIRCULAR-
SAW
AND
PLANING
MACHINE.

[Copyright.]

✧
„FOUR-
CUTTER”
OR
MATCHBOARD
MAKING
MACHINE.



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relieving our feelings in respect to the weather, for it must be conceded that it was none too good during the last few days of November and the early part of December, we proceeded to inspect the works, and the following particulars give briefly the result of our visit.

PREPARING THE WOODWORK.

Timber is the material used for the construction of the machines, so our first call was made to the stacks of lumber. At this time of the year the supply on hand is rather small, for the reason that there are a large number of incubators on

lengths, if necessary, are then passed through the planing machine, from which they come out with a smooth and glossy surface. Perhaps one of the most interesting mechanical devices is the "four-cutter." By means of this machine the timber is prepared on all four sides at once, and not only prepared—*i.e.*, planed—since each side can be given a different form. For instance, at the time of our visit the machine was set to smooth the two sides of pieces of 2in. by $\frac{5}{8}$ in. and to groove the two edges. If required, one edge can be tongued and the other grooved, or both tongued. Or, again, edges can be bevelled or rounded; in fact, this machine is capable of



FASHIONING THE WOODWORK.

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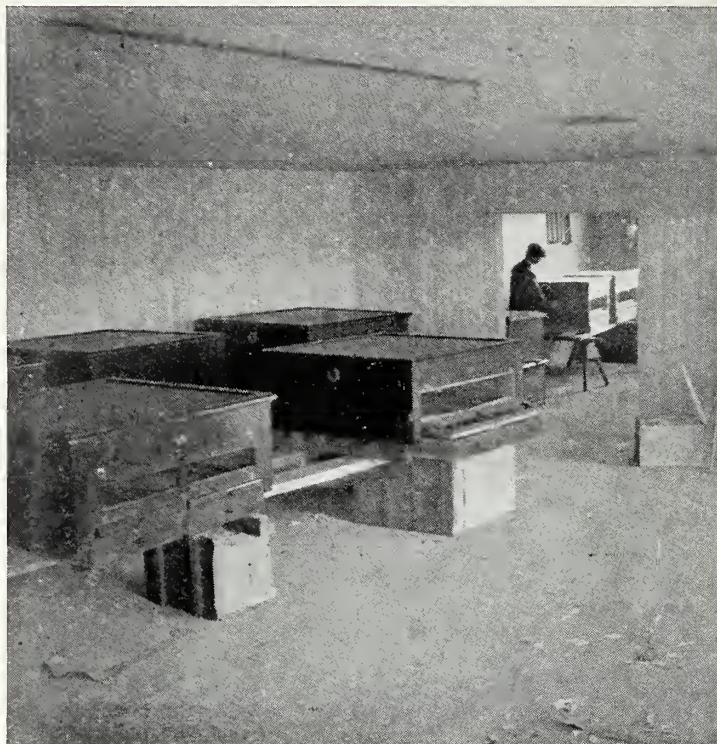
hand ready for the coming season's trade, but even so the pile we saw contained about 100,000 feet of material. This is being quickly absorbed by the various machines, and every day the stock decreases. The works are fitted with all necessary up-to-date machinery, and in the saw-mill the rough lumber is simply devoured, to be turned out smoothly prepared into pieces of the correct size and shape. The circular-saw cuts the planks into the required widths, and these narrow

turning out practically any shape. Other machines in the mill are the band-saw and the cross-cut circular-saw. The former is used for cutting curves, &c., anything that cannot be done by the other saws in the works. The latter saw is employed to cut across the grain as against the machine just mentioned, which saws with the grain of the wood. The motor power consists of a gas-engine which has a special room for itself.

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THE CARPENTERS' SHOP.

From the saw-mill we passed into the main carpenters' shop, where the many different pieces of wood are brought together to form the whole. The number of parts which go to form an incubator is very great, for there is not only the double casing to be made, but egg drawers, nursery drawers, frames for diaphragms, &c., &c., have to be put together. Exactness and perfection in finish are the two predominant notes all over the shops, and this undoubtedly accounts for the quality of the final product. This section of the works is a large, well-lighted shed with benches running round three sides. An illustration gives a view of one end of the carpenters' shop and shows to the left stacks of egg-trays, in the centre a partially completed 390-egg size machine, and in the right-hand back corner a number of outside cases for smaller-sized incubators. The largest-sized incubators are the most popular with large hatchers. We saw several of these machines



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WHERE THE INCUBATORS ARE FINISHED.



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MAKING THE HEATERS AND LAMPS.

that were part of an order for 45, the fulfilment of which is now nearing completion.

THE HEATERS AND LAMPS.

We next proceeded to inspect the metal shop,

a place of great interest to the visitor. The Gloucester Incubator is a hot-air, non-moisture machine, and therefore no copper water-tanks for the transference of the heat by radiation are required, but in their place a complicated heater is used. This can best be described as being made of pipes within pipes, with still more pipes. Very great care has to be exercised in their manufacture, for it would be fatal to the success of such an incubator if the lamp fumes could penetrate into the egg-chamber itself. In the illustration given the various parts which go to form the heater can be seen, together with the lamps in different stages of completion. The finished cases from the carpenters' shop and the metal parts from the scene of their manufacture are taken into the finishing shed. This is a large building, as must be the case, considering the number and size of the machines made, and here the final touches in their construction are given. The heaters are attached with the necessary fittings, the drawers and nursery boxes put into place, the doors are hinged, and the catches screwed on. This is detail work, but these final operations are necessary, and just as important as the other parts of the work. The last shed into which the appliances pass before being crated is the polishing room. A glimpse of this can be seen at one end of the finishing shed. The visit to this shed completes the tour of the works—a tour full of interest and instruction.

NOTES FROM CORRESPONDENTS.

YORKSHIRE NOTES.

By F. W. PARTON.

EVERY indication in the North of England points to a plentiful supply of turkeys and geese for the rapidly approaching season, when these birds provide the principal fare for the Yuletide festivities. The rearing season for turkeys has not been all that might have been desired; at the same time, we noticed, during a recent visit to the chief turkey districts, that the birds compare favourably with those of former years. They are certainly not lacking in the chief commercial asset, size, which says a good deal for the care bestowed upon them in their earlier stages. Geese rather fail in this respect, but plenty of good plump, medium-sized birds are to be seen, and we have it on the authority of one of the largest buyers that there is a growing demand for this class of bird rather than the coarse, more grossly fattened specimens.

It is gratifying to observe in several districts of Yorkshire that poultry-keepers are found, who, in the early months of the present year, caponed a number of cockerels, and allowed them to run wild until the middle of November, by which time they had grown into huge, massive birds. They are now placed in large, roomy houses with a small run attached, the exercise obtained in the small run being sufficient to keep the appetite good until the time for killing arrives. The primary object in caponing these cockerels last February and March was to supply capons to the Northern Christmas markets. This has never previously been attempted, and we wait with much interest to see whether these birds will realise a sufficiently enhanced price to reward the enterprise, and warrant a repetition in future years, and also tend to develop this old English custom. It is fully understood that capons are of very little use commercially until they reach eight or ten months old, when they attain an enormous weight without grossness. In their early stages they would probably weigh less than would entire of the same age, but the quality of the flesh amply compensates for any possible difference in weight. I have occasionally met with poultry-keepers in Yorkshire who practise caponing, but the object has hitherto been to save the labour of separating the sexes when space is limited. The present departure is quite a new one.

A great amount of interest was evinced in Leeds on Tuesday, December 7, when the Smithfield Club opened its Jubilee Show. Despite very bad weather the attendance was highly satisfactory. The entries in the dressed poultry section were considerably more than at any previous show, while those in the fancy classes, although large, were slightly below the number

of last year. The following table gives the entries for the last five years:

	1905	1906	1907	1908	1909
Poultry...	1,069	745	1,239	1,783	1,507
Dressed Poultry	34	35	28	30	45

The dressed poultry was very badly shown, and the space devoted to them was quite inadequate to do the exhibition justice. Roots were shown in front of the poultry exhibits, and spectators had some difficulty in obtaining a near view. Evidently quality of flesh and colour does not hold premier position at this show. I noticed some magnificent specimens, principally those with a dash of Sussex in their composition, which were fine boned, white-legged, and with flesh as white as suet, and yet they were absolutely ignored; size only seemed to be the governing virtue. The same thing applied to the turkeys; texture of flesh, colour, and everything else had to stand down in favour of size. I fully realise the importance of size, but I contend that it must be obtained without grossness. Therein lies the art of preparation, and it ought to receive due recognition when being judged. The exhibition of dead poultry as a whole was not particularly good. There was too much rain in the early months of the year to be conducive to the production of the best quality of table-fowls, which will account to a large extent for the very moderate display.

The live section, both in number of entries and in quality, was excellent, every class of fowl being well represented with the exceptions of geese and turkeys, in which competition was far from keen.

NOTES FROM WALES.

By A. T. JOHNSON.

A FEATURE of much importance to the poultry-keepers of the Principality is the sale of pure-bred stock which is being conducted at Wrexham by Messrs. Thorne and Bessil. This is, I believe, the only auction of its sort in Wales; in fact, the only one north of Birmingham to my knowledge, and if we can judge by the steady increase of the entry in the annual sales catalogue, and by the very apparent improvement in the quality of the birds that change hands at this mart, the latter has already more than justified its existence.

The effect of the cold, wet autumn seems as though it would be felt for a long while yet. Many hens have not recovered from the moult, and, notwithstanding a favourable start made by the pullets, the egg-supply fell off most lamentably during November and December. This was largely due to insufficient shelter, and particularly to the absence of that essential dryness under foot without which

autumn eggs are hard to get. Whether Wales is wetter than any other part of these islands I do not pretend to decide, but if it is not, it has been weather for oilskins for long enough. But Taffy, being amphibious himself—from necessity rather than choice—does not mind weather very much, and he too often seems to think that his hens ought to turn their tails to the wind—after the manner of his prospective mutton—and make the best of a bad job. Perhaps they do, in their own way, but they do not lay. Eggs have never in my recollection—and it goes back many years—been so dear and difficult to get. At the time of writing they are twopence each, and you have to beg them at that price. Some more enlightened poultry-keepers, recognising the absurdity of a “market price” when there is practically no market, are composedly getting threepence apiece without any trouble. At the time of writing there is every prospect of Christmas geese being fairly plentiful, and table-fowls are still easy to obtain, but the quality is poor. Turkeys are, as usual, scarce, and the Welshman will no doubt once more have his market stalls festooned with Irish, English, and foreign birds, the greater part of which he could rear himself if he chose to do so.

Although the harvest was late and prolonged, the quality of the home grain lately threshed is of very fair quality so far as weight is concerned. The past year, however, will long be remembered as one of the very worst ever experienced. Even in November I saw some fields of oats on the mountain slopes with the snow upon them; and, worse than that, a closer inspection revealed that tell-tale film of green which creeps over the sinking sheaves, when all hopes of a “harvest home” must be relinquished.

The Welsh branches of the Poultry Club are progressing favourably. In the North Colonel Sandbach has been re-elected Chairman, Mr. F. G. Wyndham Delegate, and I still continue to fill the post of Hon. Secretary and Treasurer. With the object of stimulating interest in this branch of the Club, Mr. Wyndham is presenting it with a valuable trophy, to be competed for at all N. Wales shows held this year under rules. The prize will be confined to exhibitors within the radius and who do not keep a poultry-man. Thus “the small man” will be given a chance and encouragement. Unfortunately the N. Wales branch is still without its county cup, many subscriptions being in arrears. In the South the Rev. Lewis Jones, as Hon. Sec., has had his energies rewarded, for the club membership in that branch numbers over 50, and the county cup has been granted. The Rev. Lewis Jones is Delegate and Treasurer as well as Hon. Secretary, and Mr. S. W. Thomas has been re-elected Chairman.

IRISH NOTES.

By MISS MACQUILLAN.

DURING the past autumn it has been the privilege of the writer to spend a week in Kerry, and to adjudicate at four poultry shows—viz., Listowel, Ardfert, Killarney, and Tralee, the three first-named

being held under the County Committee's Poultry Scheme, under the Department of Agriculture, and the last being the County Agricultural Society's Show. Miss J. Quinn, the poultry-instructress for Kerry, is the organiser of these events, which are most useful from an educational point of view, not only to the people for whose benefit and instruction they are held, but to any outsider who may have the good fortune to be present, and who is interested in the poultry industry and its furtherance in Ireland. About fourteen classes for the most useful breeds are given, the prize lists being printed on postcards. No entry forms are required, as the entries are taken on the spot, and the catalogue is made up and entry-fees collected before the show commences.

Kerry is essentially an egg county, except in the district round Killarney; therefore the breeds mostly in evidence are Leghorns, Minorcas, and White Wyandottes. The bulk of the population are small farmers with but a few acres of land, and some of it very poor, so that it has been found that the lighter breeds, which take less to support them, are best suited for the mountainous districts, Brown Leghorns doing particularly well. In the more fertile agricultural districts White Wyandottes are giving excellent results. The native fowl of Kerry are so very small that the writer, when cycling through the country in the Dingle Peninsula, inquired why so many people kept Bantams, and was informed that those were the full-grown fowl of the district. There are now twenty-eight egg-stations for hens and ducks, five for Embden geese, and twenty for stud turkeys, and last year 1,820 sittings were sold. The quality of the birds on these stations is very satisfactory, and the writer was particularly struck by the fact that all the exhibits at the shows and the birds on the stations were in such good health—not a single sickly-looking specimen to be seen. Though there are no fanciers in Kerry who go in for exhibiting outside the county, yet the quality of many birds on view was well up to standard, and several could have held their own in good company, especially some White Orpingtons, Runner ducks, and turkeys. Eggs being the most important industry, Indian Runners are the ducks kept, and these are to be seen in large numbers. In the county town of Tralee there is a yearly turnover of £13,000 alone for eggs. The Wholesale Co-operative Society pickles them in large quantities by the lime and salt process.

By MISS MURPHY.

THE chief event in poultry circles was the Royal Dublin Society's show at Ballsbridge. We have never seen so large an attendance of visitors, and great interest was displayed in the poultry section. Some of the premier awards went across the Channel, but on the whole Irish fanciers held their own, although the birds were below last year's standard. The surprise of the show was the winner in the adult turkey class. This bird, shown in fine condition by a novice, a Stationholder under the Department of Agriculture, carried off

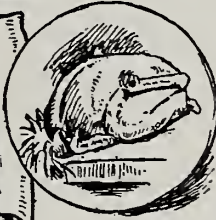
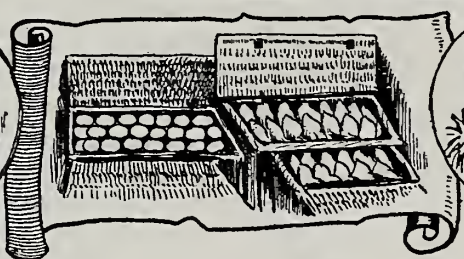
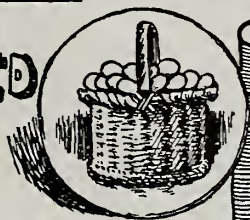
premier honours in competition with well-known winners. The quality of the young turkeys, both cockerels and pullets, was disappointing.

In poultry the popular breeds came up well in numbers, and the quality was in most of the classes good. The Brown Leghorns made, however, a very poor display, which is strange, seeing how popular they are. The new class for Sussex filled well, but the quality still leaves a great deal to be desired. Mr. Swamley took the lion's share of prizes. The same fancier was very successful in the dead poultry classes, winning first and second for a pair of Faverolles-Indian Game. The first prize birds were claimed at 15s. the pair. An interesting story attached to these birds. An Indian Game hen, the only bird of the kind on the place, stole her nest and brought out a hatch of seven chickens, all of which were reared successfully. Four of these were the winning pairs in the class for cross-bred chickens; the remaining three were entered in the live table-poultry classes, where they obtained the "Reserve" card and sold for £1, so that, including prize money, the seven birds brought the very good total price of £3 15s. The chickens in the "dead" classes were very white, and the shanks showed little trace of the yellow

staining. It is usually said that the shanks are more liable to come yellow when the hen is yellow shanked. In this case all the shanks were white, and the plumage showed very little trace of the same colouring. It was rather interesting to compare the colour of the chickens with the colour of a pen near them, produced by crossing the Indian Game cock with Faverolles hens; in the latter case the usual colouring of the Indian Game cross prevailed. No very sensational prices were made at the auction. Miss Macquillan's first prize Barred Rock cockerel was a bargain at £5 5s., so were the trio of Rocks catalogued by Miss Staples at 30s., and claimed for 53s. In the dead poultry classes the poulterers did not always see eye to eye with the judge, except in the case of the beautiful chickens shown by Lady Dunleath. These were placed first, second, and third, and were claimed at auction for 13s., 12s. and 13s. respectively. In the class for a pair of pure-bred chickens, the first and second prize pair made 10s. each and the third prize 11s. 6d. In the dead turkeys the first prize bird was knocked down at 15s., the second and third, much superior birds but not so well shown, went to 28s. and 25s. respectively. The third prize geese made the highest price—viz., 13s. for the pair, and at this figure they were a decided bargain.

THE MARKETS & MARKETING

CONDUCTED
By



VERNEY
CARTER

Market Reports, Week Ending November 24.

The week was a quiet one, the demand for poultry being irregular. The best quality of Surrey birds were in fair demand, but values ruled rather low. Pheasants, being plentiful and cheap, sold freely. Turkeys were more plentiful and sold at fair prices, French and Irish realising from 8d. to 1s. per lb. for cocks, hens from 9d. to 10d. English eggs were very scarce.

Week Ending December 1.

There was practically no change to report from the previous week. Fair demand for best quality of poultry. Irish and foreign turkeys realised much the same values as last week; they were, however, shorter in quantity than is generally the case at that period, through shippers holding back for Christmas market.

Week Ending December 8.

Taken all round, trade, though quiet, showed a little

improvement. Some Russian turkeys came on to the markets. Hungarian birds realised from 8d. to 8½d. per lb.; Italians, 9d. to 9½d.; French, 9d. to 1s.; hens, 9d. to 10d. per lb. Foreign eggs receded in values about 1s. per 120. English eggs slightly more plentiful.

Week Ending December 15.

Poultry realised better values, advancing by from 3d. to 6d. per head for best quality. Some prime English turkeys realised from 11d. to 1s. 3d. per lb.; French cocks, 9d. to 1s. 1d.; hens, 10d. to 1s.; Italian, 9d. to 10½d.; Hungarian, 8½d. to 9½d. French geese realised from 6½d. to 7d. per lb. Capons realised from 4s. 6d. to 7s. 6d. each. There was a general feeling of expectancy about the markets respecting the Christmas sales, which commence about the 17th. The foreign supplies of turkeys were not coming to hand as freely as anticipated.

ELEVEN MONTHS' IMPORTS OF EGGS.

CONSIDERABLE REDUCTION IN THE QUANTITIES OF BETTER-CLASS FOREIGN EGGS.

THE present moment is a very good time to give a short review of our imports of foreign eggs, as with the close of November our supplies of foreign fresh eggs come practically to an end. During November and December two-thirds of the eggs received in this country from abroad are either cold-stored or pickled. The volume of the trade in cold-stored Russian eggs is increasing annually, but in other countries the system of cold-storage has not been resorted to to the same extent. Foreign preserved eggs are more plentiful on our markets this season than was the case last year. There is an increase, amounting to 190,141 great hundreds, recorded in the imports for November last, as compared with November, 1908.

Reviewing the imports of eggs for the past eleven months, there are some points which should prove of interest to home producers. As will be seen from the table given, there has been a very considerable shortage in the quantities received in this country of the better class of foreign eggs. Notable shortages are recorded from Denmark, Italy, and Austria-Hungary. The shortage of upwards of 90,300,840 eggs from Denmark and Italy alone has had a very considerable effect upon the value of eggs on the English markets generally. The supplies from Austria-Hungary also show a remarkable diminution. From this source supplies have fallen off to the extent of about 142,000,000 eggs. France is the only country supplying us with the best class of foreign eggs which has increased her exports to this country. She has seen her opportunity and increased her supplies by about 14,200,640 eggs, but this increase did not prove sufficient to fully counteract the effect of the shortages recorded from Denmark, Italy, and Austria-Hungary. On the other hand, there is a considerable increase recorded in the quantities received from Russia and from those countries classed under the heading of "other countries." These eggs, however, are of an inferior type, and therefore have not affected the values of the superior qualities of eggs.

Evidence rather goes to prove that imports from those countries which at present supply us with the better class of eggs will continue to show a tendency to decrease, as compared with former years, rather than increase, principally on account of the increased demand on the Continent. Should this prove to be the case, it should act as a stimulus to home production.

Even after making allowance for the increased supplies received from France, the net shortage in the best class of foreign eggs received in this country up to the end of November last, as compared with the corresponding period of last year, amounts to 223,953,800 eggs. The total increase in the cheaper eggs amounts to 128,832,360.

Below is given a table showing the respective quantities received from each country during the first eleven months of 1908 and 1909, and also the amount of increase and decrease.

Countries of Origin.	1908. Gt. hds.	1909. Gt. hds.	Increase. Gt. hds.	Decrease. Gt. hds.
Russia.....	6,701,861 ..	7,410,573 ..	708,712 ..	..
Denmark	3,429,040 ..	3,097,431 ..	..	321,609
Germany.....	1,090,106 ..	537,599 ..	..	552,507
France.....	905,930 ..	1,025,102 ..	119,172 ..	..
Italy.....	1,267,662 ..	836,764 ..	..	430,898
Austria-Hungary	1,803,060 ..	1,172,200 ..	..	630,860
Canada	35,685 ..	2,772 ..	..	32,913
Other Countries	1,419,166 ..	1,977,754 ..	558,588 ..	..
	16,652,510	16,060,195	1,386,472	1,968,787

TABLE-POULTRY AT SMITHFIELD.

AS usual, there were several opinions regarding the exhibits in this section, some holding that they compared favourably with those of recent years, some asserting the opposite, and others declaring that there is a considerable sameness in dead poultry classes. Probably the latter view represents the general impression as regards the average of casual visitors, but the observant find their interest in comparisons; and from the opposite standpoints of these latter the last display was at once better and worse than former exhibitions. The section is in any case certainly capable of considerable improvement. The entries totalled 217, a decrease on those of 1908.

The mixed question of size and quality, concerning which there has been recent discussion in table-poultry circles, was not unnaturally a subject of conversation among the practical producers in the crowd; and the general tendency was towards a greater satisfaction with the awards than has been the case at some earlier shows. Grossness was the chief characteristic of some specimens, but quality prevailed as a whole; and the difficult work of judging was in the main adequately performed.

The most notable winner was W. A. Smith, who made twenty-nine entries and was awarded twenty-two prizes. In the Dorking classes the quality of the pullets was superior to that of the cockerels, and the prizes in the latter went rather to size; but Mr. Baxendale's pullets were easy winners for quality in addition to size. These two classes were not, however, very well filled.

The farmyard section contained the gold medal champions, a couple of pullets, remarkably fine specimens, shown by Mrs. Paynter. The winners of the second and third places were not far behind the first.

The turkey classes were not well filled, but the quality of the exhibits was of a high standard. The first prize, cup, and silver medal, were awarded to Lord Rothschild for a pair of American Bronze cocks, the fourth prize being secured by the same exhibitor. The second award went to Mr. A. Burgess, and the third to Mr. R. H. Hibbs. In the hen class Lord Rothschild again secured the premier award, with reserve for the cup and bronze medal, and also the third prize, the second going to Mr. A. Burgess.

TABLE OF PRICES REALISED FOR HOME, COLONIAL, AND FOREIGN POULTRY, GAME, AND EGGS FOR THE FOUR WEEKS ENDED DEC. 18, 1909.

ENGLISH POULTRY—LONDON MARKETS.

DESCRIPTION.	PRICES REALISED DURING THE MONTH.			
	1st Week.	2nd Week.	3rd Week.	4th Week.
Surrey Chickens	2/3 to 4/6	2/6 to 4/6	2/6 to 4/6	2/9 to 5/0
Sussex "	2/3 " 4/6	2/6 " 4/6	2/6 " 4/6	2/9 " 5/0
Yorkshire "	2/0 " 4/0	2/0 " 3/6	2/3 " 4/0	2/6 " 4/0
Boston "	2/0 " 4/0	2/0 " 3/6	2/3 " 4/0	2/6 " 4/0
Essex "	2/0 " 4/0	2/0 " 3/6	2/3 " 4/0	2/6 " 4/0
Capons	1/6 " 2/6	1/6 " 2/6	1/9 " 2/9	4/6 " 7/6
Irish Chickens	1/6 " 2/3	1/4 " 2/3	1/4 " 2/4	2/6 " 3/0
Live Hens.....	2/6 " 4/0	2/6 " 4/0	2/6 " 4/0	3/0 " 4/6
Aylesbury Ducklings..	5/0 " 7/0	5/0 " 7/6	5/0 " 7/6	5/6 " 8/6
Ducks	0/8 " 0/11	0/8 " 1/0	0/9 " 1/0	0/9 " 1/1
Geese.....	—	—	—	—
English Turkeys per lb.	—	—	—	—
Irish Turkeys .. "	—	—	—	—

ENGLISH GAME—LONDON MARKETS.

DESCRIPTION.	PRICES REALISED DURING THE MONTH.			
	1st Week.	2nd Week.	3rd Week.	4th Week.
Grouse	2/6 to 2/9	2/6 to 2/9	2/6 to 2/9	2/6 to 2/9
Partridges.....	2/6 " 2/9	2/6 " 3/0	2/6 " 2/9	2/9 " 3/0
Pheasants.....	1/9 " 2/3	1/9 " 2/3	2/0 " 2/6	2/0 " 2/6
Black Game	2/6 " 3/6	2/6 " 3/6	2/6 " 3/6	—
Hares	1/9 " 3/3	1/9 " 3/6	1/9 " 3/6	2/0 " 4/0
Rabbits, Tame	1/0 " 2/3	1/0 " 2/0	1/0 " 2/6	1/3 " 2/6
" Wild	0/6 " 1/1	0/6 " 1/0	0/6 " 1/0	0/6 " 1/1
Pigeons, Tame	—	—	—	—
" Wild	—	—	—	—
Woodcock	2/0 " 2/3	1/6 " 2/0	1/9 " 2/3	2/3 " 2/6
Snipe.....	2/0 " 2/9	1/0 " 2/0	1/6 " 2/6	1/6 " 2/6
Plover	0/6 " 1/0	0/6 " 1/0	0/6 " 1/0	0/6 " 1/0
	0/4 " 0/6	0/4 " 0/6	0/5 " 0/7	0/5 " 0/6

ENGLISH EGGS.

MARKETS.	PRICES REALISED DURING THE MONTH.			
	Per 120.	Per 120.	Per 120.	Per 120.
LONDON	17/0 to 21/0	17/0 to 21/0	17/0 to 21/0	17/0 to 20/0
Provinces.	Eggs per 1/-	Eggs per 1/-	Eggs per 1/-	Eggs per 1/-
MANCHESTER ..	5 to 6	5 to 6	5 to 6	5 to 6
BRISTOL	1/10	1/10	1/10	1/10
	per doz.	per doz.	per doz.	per doz.

FOREIGN POULTRY—LONDON MARKETS.

COUNTRIES OF ORIGIN.	PRICES REALISED DURING THE MONTH.			
	Chickens. Each.	Ducks. Each.	Ducklings. Each.	Geese. Per lb.
Russia	—	—	—	—
Belgium	—	—	—	—
France	—	—	—	—
United States of America	—	—	—	—
Austria	—	—	—	—
Canada	—	—	—	—
Australia	—	—	—	—

FOREIGN GAME. LONDON MARKETS.

COUNTRIES OF ORIGIN.	DECLARED VALUES.	
	Game.	Poultry.
Russia	—	£1,090
Austria-Hungary	—	5,517
France	—	6,155
United States of America	—	287
Other Countries	—	6,958
Totals	—	£20,007

IMPORTS OF POULTRY AND GAME. MONTH ENDED NOV. 30, 1909.

COUNTRIES OF ORIGIN.	DECLARED VALUES.	
	Game.	Poultry.
Russia	—	£1,090
Austria-Hungary	—	5,517
France	—	6,155
United States of America	—	287
Other Countries	—	6,958
Totals	—	£20,007

IRISH EGGS.

DESCRIPTION.	1st Week.	2nd Week.	3rd Week.	4th Week.
	Per 120.	Per 120.	Per 120.	Per 120.
Irish Eggs	14/0 to 15/6	14/0 to 15/6	14/6 to 16/6	13/6 to 18/0

FOREIGN EGGS.

DESCRIPTION.	1st Week.	2nd Week.	3rd Week.	4th Week.
	Per 120.	Per 120.	Per 120.	Per 120.
French ...	15/0 to 18/0	16/0 to 18/0	15/0 to 17/0	15/0 to 17/0
Danish ...	13/0 " 16/0	14/6 " 18/0	14/0 " 17/0	14/0 " 17/0
Italian ...	12/0 " 14/6	12/6 " 15/0	11/6 " 14/0	11/6 " 13/0
Austrian...	9/0 " 11/0	9/0 " 10/6	9/0 " 10/6	9/0 " 11/0
Russian ...	8/6 " 10/6	8/6 " 10/6	8/6 " 10/6	8/9 " 10/3
Australian.	—	—	—	—
Canadian..	—	—	—	—

IMPORTS OF EGGS.

COUNTRIES OF ORIGIN.	DECLARED VALUES.	
	Quantities in Gt. Hund.	Declared Values.
Russia	1,146,194	£481,235
Denmark	357,414	214,950
Germany	93,114	40,287
Italy	38,502	17,541
France	44,208	19,782
Canada	2,757	1,450
Austria-Hungary	122,088	53,079
Other Countries	164,184	73,788
Totals.....	1,968,461	£902,112

MONTH ENDED NOV. 30, 1909.

ANSWERS TO CORRESPONDENTS.

The Editor will be glad to hear from readers on any Poultry Topics, and all Queries addressed to the paper will be answered if possible in the issue following their receipt. The desire is to help those who are in any difficulty regarding the management of their poultry, and accordingly no charge for answering such Queries is made. Unless stated otherwise, Queries are answered by

F. W. PARTON,

Lecturer in Aviculture, The University, Leeds.

Drying Feathers.

I want to make some use of, or sell, the feathers from the birds I kill and market, and which at this time of the year are rather considerable in quantity. Must I dry them, and, if so, how is it done?—E. S. C. (Devon).

The sale of feathers becomes a matter of real importance to the large producer, and to make them saleable you must sort and dry them. Curing is a further process, but one you need not undertake unless the buyer requires you to do so. The sorting or separation must be done at the time of plucking, the hard, or quill, feathers being placed in one box, and the soft, or body, feathers in another. The most economical use of the former is as a part of the farmyard manure for dressing the land. The best place in which to dry the latter is upon the barn or other large floor, where they should be spread and left for about a week; then tie them up in large paper bags (made of sheets of paper tacked together), and hang these bags from the rafters, where they will be exposed to a current of air. Curing involves immersion in lime-water, with subsequent successive washings in hot and cold water, and a long drying and shaking, so that you should preferably dispose of them after simply drying. There are other methods of drying (by heat) and curing (with different preparations); but those indicated are generally sufficient, and are adopted by many large marketers.—J. W. H.

Hatchable Eggs.

How should I select eggs for setting; or would it be correct to set all I get?—W. H. (near Barnsley).

In the first place you should know your breeding-stock and their suitability for the purpose, and you should have mated the birds for a sufficient time to ensure fertility, and have fed them correctly. But perhaps you know all that, and simply refer to the selection of the eggs as regards shape and size; in which case it very seldom happens that "all you get" will be hatchable—apart from the first-mentioned considerations. The proportion of hatchable eggs, as indicated by shape and size, varies with seasons. Some years the selection results in a much larger number being rejected than in others; but whether the proportion be large or small you must avoid setting mis-shapen, rough-shelled, or very large or small eggs. Those selected should be smooth in shell, even in shape, and of a medium size.—J. W. H.

Feeding Water-fowl.

Can you tell me what mixture should be used in feeding water-fowl of various sorts, all kept together upon a large pond with a grass field to run over?—Novice (Harrow).

A very commonly used mixture for the collections kept in public and private parks consists of one part each

of wheat and barley, with a quarter part of buckwheat and the addition of some small round maize and hempseed in winter. Grass and chickweed comprise the most suitable green food.

Cross-Breeding.

What crosses are the best for (1) summer laying; (2) winter laying; and (3) for table-poultry, and which breed is selected for the male?—P. R. B. (Catford).

(1) Houdan male bird with white Leghorn hens; (2) Leghorn male (white preferred) with Plymouth Rock hens; and (3) Indian Game male with Dark Dorking, White Orpington, or Faverolles hens.

Keeping Eggs for Hatching.

Please advise me as to the best method of keeping eggs for incubation.—F. H. (Marden).

Eggs intended for this purpose should be kept in a cool place where the temperature is as nearly as possible 50deg. They may be put in a rack made for the purpose or in an ordinary basket. If they have to be kept any great length of time, they should be placed in a box of bran. It is really immaterial how the eggs are placed, provided that they are turned every other day, so as to prevent the contents adhering to the shell membrane.

Brief Replies.

P. J. M. (Newquay): No.

G. P. (Dover): About 10s.

F. P. W. (Burnley): Read the article in this issue.

F. V. (Calais): We cannot undertake such work as you indicate.

W. S. (Wrexham): There is no definite information on that subject.

S. G. M. (Forfar): The district mentioned would be very suitable.

W. J. (Blackburn): There are single- and rose-comb Rhode Island Reds.

M. B. (Gloucester): Refer to our advertising columns for eggs for hatching.

E. N. (Reading): Send us further particulars, and we shall be glad to advise you.

M. B. B. (Gateshead): Faverolles-Buff Orpington would be a suitable cross for your purpose.

F. P. (Harrogate): A long hundred with reference to eggs is the name given to ten dozen, or 120.

N. W. (Taplow): We do not believe permanganate of potash has any effect in the direction named.

E. F. (Leith): Imported eggs from Denmark at this season of the year are practically all preserved.

M. A. (Düsseldorf): We do not think very much of the method you mention. Refer to page 364, Vol. I.

BUFF LEGHORN CLUB.

OWING to the illness of Dr. Corner (the hon. sec. of the Buff Leghorn Club), and his consequent absence from England, it has been impossible to arrange a club show this winter.

The work of the hon. sec. is, in the meantime, being carried on by Colonel Allatt, of Thumblands, Farnham, Surrey, and he is already taking steps to ensure adequate representation of the variety at suitable shows next autumn, when the silver cups of the Club will be competed for. The interests of novices will be carefully considered, and several special prizes and guaranteed classes have already been promised by leading members of the Club. It has also been arranged that the six new members first joining the Club in 1910 will each receive a free sitting of Buff Leghorn eggs. The subscription is 5s. annually.

Indications are not wanting that the expected boom in Buffs has begun. The new show standard has been recognised by our American fellow-fanciers as "a step in the right direction," and is "viewed with great satisfaction" by our own Utility Poultry Club. At two of the leading shows in the South of England this winter the first prize Buff Leghorn pullet was claimed at catalogue price.

TRADE NOTICES.

A Dry Chick Food.

The "Hinwick" Dry Chick Food has obtained a well-earned success. It is an all-seed food, and exactly the same as used by the Hinwick Poultry Farm in rearing their stock. The Hinwick catalogue contains a description and an illustration of the poultry-house recently placed on the market by this firm, which is remarkable for its high-class material, construction, and low price.

Finch and Fleming, Limited,

Of Pulloxhill, Amptill, Beds, send us their catalogue of incubators and other poultry requisites. The Prairie State Incubators, which are of the hot-air type, have gained over 500 prizes throughout the world, and the new Sand Tray model has already become deservedly popular owing to the simplicity and regularity of its working, its strong construction, and its moderate price. The "F and F" indoor and outdoor brooders also contain several notable features. Our readers may be reminded that Messrs. Finch and Fleming are practical poultrymen. They raise thousands of birds on the Bedfordshire farm, and are thus in an excellent position for knowing what the up-to-date poultry-keeper really needs.

Arthur Neaverson's Appliances.

We have received the latest catalogue of appliances and accessories manufactured and sold by Arthur Neaverson, of Peakirk, by Peterborough, and note that the goods listed are well up to date. All kinds of

portable poultry-houses, coops, fattening-cages, and sitting-boxes are turned out by the firm. The special sitting-boxes, built in sets of three and six, are well worthy of mention; they are fitted with a wire run to each compartment, so that the hens can be fed without interfering with each other. A postcard from any reader will procure one of these catalogues.

Spratt's Patent Almanac for 1910.

This is a handsome production, containing colour plates of notable dogs, poultry, cage birds, and game, with concise and practical notes on the same. Conspicuous among the poultry are a pair of White Orpingtons, while a pair of Old English Game and another of Chinese Pheasants are attractive pictures. Any of our readers can obtain a copy of this publication gratis by addressing a postcard to Spratt's Almanac Department, 24, Fenchurch Street, E.C.

Mr. Tamlin's Catalogue.

Consisting of no fewer than 136 quarto pages of letter-press and illustrations, printed on the finest art paper, and with its front cover containing a striking design in two colours, Mr. Tamlin's catalogue for the ensuing season is a publication of which any appliance maker might be justly proud. All the various goods manufactured at the St. Margaret's Works, Twickenham, are described in the fullest detail, the premier place in the volume being occupied by a description of the famous "Nonpareil" Incubators—from the 30-egg to the 300-egg capacity—which are known throughout the world. It is interesting to note that during the past season, which has shown a steady increase of trade in all departments, the sale of "Nonpareils" reached the enormous total of 63,500. A very strong feature of the catalogue is the series of photographic views, taken on dozens of the leading poultry establishments where Mr. Tamlin's appliances are used, and artistically grouped so as to form comprehensive pictures of the places in question. The whole publication is a triumph of attractive advertising.

Mr. Tamlin's Exports.

The following is a list of Mr. W. Tamlin's exports for the month of November, 1909: Six 200 incubators, twelve 60 incubators, six poultry-houses, to M. Andre Masson, France; three 200 incubators, six 100 incubators, ten 60 incubators, to Mr. J. F. Marshall, Transvaal, South Africa, per ss. Goorka; twelve 100 incubators, six 60 incubators, to Messrs. A. F. Philips and Co., Rhodesia, per ss. Saxon; one 100 incubator to Mr. C. Lottery, Buenos Ayres, per ss. Amazon; one 100 incubator, to Mr. J. T. Guilbert, Tasmania, per ss. Omrah; one 60 incubator, to Mr. C. A. Langlais, Natal, South Africa, per Dover Castle; one 100 incubator, one 100 foster-mother, to Mr. P. Lovelock, Delagoa Bay, per ss. Bechuana; one 200 incubator, one 60 foster-mother, to Mr. G. Martin Lee, Alexandria; one 60 incubator, one 60 foster-mother, to Mr. T. A. Hastings, Barbados, per ss. St. Jan; one 60 incubator, to Mr. L. Gardner, West Coast of Africa.

The Waterman Fountain-Pen.

As a really good New Year's gift, Waterman's Ideal fountain-pen may be commended to the notice of our readers. Waterman's Ideal is made in three styles—viz., the Standard Waterman's Ideal, sold at 10s. 6d. and upwards; Waterman's Ideal pump-filling pen, for those who prefer a self-filler; and Waterman's Ideal safety pen, which is priced at 12s. 6d. and upwards. The last-mentioned is extremely popular with ladies, travellers, and sportsmen, as it will not leak in whatever position it is carried.

Leonard Smith and Co., Ltd.

One of the features of the Bingley Hall Show at Birmingham was the brisk business done by Messrs. Leonard Smith and Co., Limited, of Bromsgrove Street, Birmingham. During the four days many well-known breeders and exhibitors were handing in orders for gallons of the firm's medicines and condiments, and their example was being followed by others who realised

that where the knowing ones led they would be wise to follow. The same firm were also doing a brisk trade in their "Up-to-Date" Biscuit-meal at 18s. per cwt., and their "Up-to-Date" Laying-meal at 12s. 6d.

Walker's Loose-Leaf Diaries and Books.

We have pleasure in again calling attention to the loose-leaf type of book manufactured by the firm of John Walker and Co., Warwick Lane, E.C. The diaries are made in all sizes and bound in a variety of leather covers, and for the many advantages this type of book possesses it is the best on the market. The simplicity of construction prevents them getting out of order, the rings being solid and rigid. The series of expert manuscript books produced by the same firm also possess distinct advantages. The leaves can be torn out and inserted in separate transfer cases for various subjects. Whatever kind or type of diary, pocket, or note-book is required, the same can be supplied by Messrs. Walker and Co.

PROPERTY BUREAU.

During the past twelve months we have received frequent inquiries from our readers, asking whether we can help them in finding suitable places on which to commence poultry-keeping. We realise the great difficulty experienced by those desirous of buying or renting suitable properties, and to overcome this we have got into touch with a number of Estate Agents in various parts of the country. As a result, we propose month by month to publish a list of those properties which appear to be suitable as regards house, acreage, locality, and price. We are also willing to insert readers' "wants" free of charge. All communications should be addressed to:

THE EDITOR,

ILLUSTRATED POULTRY RECORD,

15, Essex Street, Strand, London, W.C.

IN THE COUNTY OF BERKSHIRE.

A delightfully-placed FREEHOLD RESIDENCE, three and a half miles from a large town, with stabling, two four-roomed entrance lodges, small farmery, four-roomed cottage, cattle yard, cart shed, piggeries, &c., productive garden, with greenhouse, and meadow land, in all about 19 acres. The residence contains eight bedrooms, two dressing-rooms, three reception-rooms and usual offices. RENT, £160 per annum. PRICE, FREEHOLD, £4,000.—Box 1, at the Office of the ILLUSTRATED POULTRY RECORD.

An attractive DETACHED HOUSE, situate on very high ground, about two miles from station on the South-Eastern and Chatham Railway. House, four good bedrooms, bathroom, two reception-rooms, and usual offices. Large vegetable garden and paddock of 3 acres. RENT, £35 per annum. PRICE, £700 FREEHOLD.—Box 1, at the Office of the ILLUSTRATED POULTRY RECORD.

FOR SALE, LEASE of old-fashioned RESIDENCE, containing three large reception-rooms, six bedrooms, storeroom, bathroom, with large walled garden, cottage, stables, outbuildings, with nearly 7 acres of land. Near a station, within an hour of London.—Box 3, at the Office of the ILLUSTRATED POULTRY RECORD.

IN THE COUNTY OF NORFOLK.

One mile from a station on the Midland and Great Northern Railway, five minutes' walk from village, with church, shops, and post-office, eight miles from Sandringham and thirteen from King's Lynn. A very DESIRABLE PROPERTY of 5½ acres, with a good house, comprising six bedrooms and three reception-rooms, good kitchens and offices. Good garden with lawn, well stocked with fruit-trees, orchard and paddock, and also about 3½ acres of arable land. Two-stall stable, barn, cow-house, stack-yard. Excellent supply of good water from a well. Valuable common rights also go with the property. Very healthy locality. Tithe and rates about £6 per annum. FREEHOLD, £950. RENT, £45 per annum.—Box 2, at the Office of the ILLUSTRATED POULTRY RECORD.

DOUBLE COTTAGE, with about four bedrooms, two reception-rooms, and offices. Good garden and 3 acres land. Four miles from station. Seven miles from Fakenham and twenty-five miles from Norwich.

FREEHOLD, £340 or offer.—Box 2, at the Office of the ILLUSTRATED POULTRY RECORD.

Excellent COUNTRY PROPERTY, with house, containing nine bed- and dressing-rooms, four reception-rooms, and excellent offices. Paved yard at rear, with good outhouses. The whole standing in good grounds of about 45 acres, comprising Park, 20 acres; arable, 10 acres; and remainder pasture and plantations. Good water and drainage. Light soil. Also good double cottage and half-acre of garden. FREEHOLD, £4,000.—Box 2, at the Office of the ILLUSTRATED POULTRY RECORD.

IN THE COUNTY OF LANCASHIRE.

Situate one and a half miles from London and North-Western Railway and three miles from main line junction, a most desirable FREEHOLD ESTATE, comprising good dwelling-house, stable, coach-house, &c., and 25 acres of land, about half of which is old grass, with large Dutch barn and other buildings. Good supply of water available. PRICE, £3,000. RENT on application.—Box 4, at the Office of the ILLUSTRATED POULTRY RECORD.

IN THE COUNTY OF YORKSHIRE.

Situate one mile from Ackworth Station, LARGE HOUSE, containing three reception-rooms, six family bedrooms, servants' hall, and 10 acres of grass land. To be Let at the LOW RENTAL of £90. Good stabling and farm buildings.—Box 4, at the Office of the ILLUSTRATED POULTRY RECORD.

PROPERTIES WANTED.

IN THE MIDLANDS.

PROPERTY WANTED, on lease, between Birmingham and the Tees, for immediate entry. Good house, with outbuildings; if possible standing in 15 to 30 acres of grass land. Must be dry soil, and adapted to poultry-keeping.—Send particulars to Box C., at the Office of this Paper.